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VOL. XIII OCTOBER, 1930 No. 10

THE USE OF SEVERAL NEW DERIVATIVES OF BARBITURIC ACID*

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AT THE present time derivatives of barbituric acid are considered as valuable drugs for surgical and nonsurgical purposes. Their value has not been wholly determined but most surgeons are agreed that from the standpoint of postoperative complications, small or hypnotic doses are to be preferred to large or anesthetic doses.

Since each of the barbiturates produces a somewhat similar effect,[1] we shall describe briefly the effect of various doses of sodium *iso*-amylethyl barbiturate (sodium amytal) on the average patient. The factors which change the patient's tolerance for the drug obviously cause variations in the effect.

SODIUM *iso*-AMYLETHYL BARBITURATE (SODIUM AMYTAL)

Sodium *iso*-amylethyl barbiturate has been used at The Mayo Clinic in approximately 2,000 cases in the period from April 1, 1929, to April 1, 1930. The conclusions reached are based on 1,712 of these cases. The drug has been used intravenously in 753 cases, rectally in twelve cases, and orally in the remainder. The most common serious untoward results following the use of a barbiturate are pulmonary edema and bronchopneumonia. It is probable that ultimately small doses must be resorted to since these untoward effects seem to be associated frequently with large doses. Pulmonary edema and bronchopneumonia must be treated early by oxygen, or oxygen and carbon dioxide, with or without the intravenous administration of concentrated solution of glucose.

Because of the relationship between dosage and effect in the average healthy adult, the subject of dosage will be taken up under four headings, representing the four stages of effect during and after the administration of sodium *iso*-amylethyl barbiturate.

In the first, or hypnotic stage, nystagmus, some vertigo and a feeling of inebriation will be produced by the administration of 4 to 6 grains (0.24 to 0.4 gm.). From 7 to 9 grains (0.45 to 0.6 gm.) may produce mild mental excitement. The patient usually answers questions readily until 5 or 6 grains (0.3 to 0.4 gm.) have been given. After about 10 to 12 grains (0.65 to 0.78 gm.) the average patient is unable to answer questions. Ordinarily there is no memory for events after this dose.

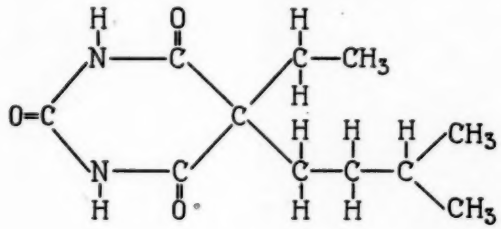
The second stage, that of inebriation, is induced by a dose of from 12 to 16 grains (0.78 to 1.065 gm.). In this stage, the patient responds to painful stimuli. The untoward result in this stage is restlessness.

In the third stage, as the dose exceeds 15 or 16 grains (1.0 or 1.065 gm.) a state of surgical anesthesia begins to develop. In this stage the systolic blood pressure falls from normal to about 90 or 80 mm. of mercury; shallow respiration, slight cyanosis, and a tendency for the tongue to fall back frequently occur. The fall in blood pressure is somewhat proportionate to the rate of injection, in that the more rapid the injection the more rapid the resulting fall in blood pressure. When hypertension is present one may expect about twice as great a fall in blood pressure as when the blood pressure is normal. We find it best to discontinue injection of the drug when

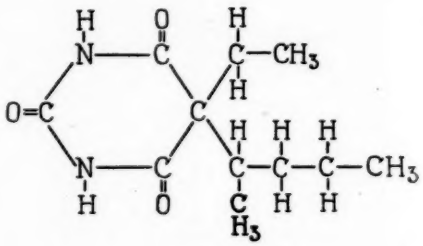
*From the Section on Anesthesia and the Division of Surgery, The Mayo Clinic. Read at the meeting of the Minnesota State Medical Association in Duluth, Minn., July 16, 1930.

the systolic blood pressure has become 85 mm. of mercury or less.

In the fourth stage the dose is between 45 and 100 grains (3.0 and 6.65 gm.). The untoward results incident to the use of various large doses are evidenced by interference with all reflexes.



Amytal



Embutal

Fig. 1. Chemical structure of *a*, *iso*-amylethyl barbituric acid and of *b*, ethyl 1-methyl butyl barbituric acid. One drug is the isomer of the other.

The sequence of events following the administration of this drug is relatively the same regardless of the tolerance which may exist; the proportion between different doses for different stages of effect remains about the same.

Sodium *iso*-amylethyl barbiturate has been used successfully by us as an antispasmodic in convulsive conditions such as tetanus, as an aid to withdrawal of alcohol in postoperative psychosis, in controlling a patient with acute mania, and in one instance for cesarean section. In the last case, the infant cried on being lifted from the uterus. At present this agent is being given to a patient who is dying from an inoperable lesion of the brain, with considerable relief. The patient has required about 3 grains (0.2 gm.) of the drug by mouth each hour for a period of about four months and has consumed, in that time, more than 9,000 grains (600 gm.).

It has been our observation that for the average adult, regardless of age, sex or weight, about one or two hours' noticeable effect for each grain of sodium *iso*-amylethyl barbiturate administered may be expected, especially if other medication has been omitted.

SODIUM ETHYL 1-METHYL BUTYL BARBITURATE (SODIUM EMBUTAL)

From March 4 to July 15, 1930, the sodium salt of ethyl 1-methyl butyl barbiturate (Fig. 1), one of the isomers of *iso*-amylethyl barbiturate was used in 705 cases, intravenously in 114 cases, orally in 575 cases, and rectally in 16 cases. This derivative of barbituric acid is essentially antispasmodic and sedative, and differs from sodium *iso*-amylethyl barbiturate in that there seems to be less delirium incident to its use and that an equivalent effect may be produced with about half as much as with sodium *iso*-amylethyl barbiturate.

Sodium ethyl 1-methyl butyl barbiturate may be used in dilute solution since its potency is high. We have used it in 6.66 per cent solution, 1 grain (0.065 gm.) to 1 c.c. The maximal dose has been 7.5 grains (0.482 gm.). The average dose has been 3 to 5 grains (0.2 to 0.3 gm.) administered in three to five minutes. It seems to be particularly valuable in preparing patients for operation and satisfactory sedation has been obtained regardless of whether the final anesthetic desired is local, general, or both, from the administration of from 1.5 to 4 grains (0.097 to 0.24 gm.) of this agent by mouth, together with 1/6 or ¼ grain (0.01 or 0.015 gm.) morphine sulphate by hypodermic injection, about thirty-five to forty-five minutes before operation.

We have found that in connection with many of the general and local anesthetics a better result may be obtained with the sodium salt of ethyl 1-methyl butyl barbiturate or of *iso*-amylethyl barbiturate than with the other barbiturates we have used, and that less local or general anesthetic is required.

We believe that the morbidity, if not the mortality, incident to the administration of general anesthetics and possibly of local anesthetics may be materially reduced by the use of preliminary medication with these barbiturates. These prep-

arations seem to allay fear, thereby keeping the patient's tolerance normal for the anesthetic that is to be used.

Sodium *iso*-amylethyl barbiturate (sodium amytal) and sodium ethyl 1-methyl butyl barbiturate (sodium embutal) have been very useful in operations on the thyroid gland in that they make it possible for the operation to be done with local anesthesia and without the use of inhalation anesthesia. The patients may be awakened at any time during the procedure and one is able, therefore, to determine immediately if injury has occurred to either recurrent laryngeal nerve.

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SPINAL ANESTHESIA: CONCLUSIONS BASED ON A STUDY OF 1,283 CASES*

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SPINAL anesthesia was used in 2 per cent of the cases of major surgery performed at the Jackson Clinic in 1920; in 1928 the percentage had doubled; in 1929 it had increased to 71 per cent, and for the present year to date this anesthesia has been used in 80 per cent of the major operations.

Previous to 1928 spinal anesthesia was used only in selected types of operations at our clinic, such as prostatectomies and extensive resections of the bowel for malignancy. Although our staff has favorably regarded this form of anesthesia for a number of years, inability to govern the fall in blood pressure has prevented its use as a routine measure. However, the rediscovery of ephedrine by Chen, a Chinese student at the University of Wisconsin, and the demonstration of its action in preventing a fall of blood pressure in spinal anesthesia, as shown by Ockerblad and Dillon in 1927, served to eliminate this objectionable feature.

Meanwhile, through the efforts of Babcock, Jonnesco, Labat, and some of the European surgeons, spinal anesthesia was again winning more advocates. Shortly prior to the 1928 meeting of the American College of Surgeons, Pitkin, among others, called attention to the value of this anesthetic in routine major surgical operations performed below the clavicles. Such interest was aroused in this procedure that a considerable portion of this meeting held at Boston was given over to a demonstration and discussion of its advantages and disadvantages. Considerable apprehension was aroused because of a death that occurred at one of the clinics, and there were reports of several other fatalities that directly or indirectly might be attributed to the anesthetic. The literature of the past contains similar reports, but in the light of our present knowledge few if any of these deaths would occur.

Pitkin's demonstration of the ease and rapidity with which spinal anesthesia could be administered caused me to visit his clinic and observe the use of this anesthetic as a daily procedure. His method was introduced into the Jackson Clinic and tried for several months, but proved to be successful in only about 75 per cent of the cases. It was frequently necessary to complete the operation under general anesthesia. Unfamiliarity with Pitkin's methods possibly accounted for some failures. For the past year and a half a volume control technic, which will be demonstrated by Dr. Stout, with moving pictures following this paper, has been used. This method in which the novocaine crystals only are used, following a preliminary injection of ephedrine, has proved entirely satisfactory. It is used in all major operations performed below the clavicles, and has proved so successful that inhalation anesthesia has been discarded almost entirely save for certain minor operations and for lesions about the face and mouth in which local anesthesia is not satisfactory. We have used general anesthesia in less than 2 per cent of our cases in a series of 1,500 thyroidectomies.

COMPARISONS

In spite of the fact that spinal anesthesia has gained tremendous popularity in the past two years, it is still looked upon with considerable skepticism by many surgeons who are unwilling to give up the old established methods. Probably there is no group of individuals as hard to convince of the merits of a new procedure as the medical profession. Possibly this is the result of frequent failures following too exaggerated claims.

Ether has been the old reliable anesthetic so long and the one that could always be relied upon that it naturally will be the last to be abandoned. It is looked upon as a comparatively safe anesthetic and, as far as deaths upon the operating table are concerned, it undoubtedly is. Little account, however, is attached to the mortalities that

*From the Jackson Clinic, Madison, Wis. Read at the annual meeting of the Minnesota State Medical Association, Duluth, Minn., July 16, 1930.

occur days or weeks later as the indirect result of ether complications. Certainly in our experience, while complications still occur, they do so considerably less frequently after spinal than following ether anesthesia. Our statistics indicate a considerable decrease in the number of postoperative sequelæ occurring from the fifth to the fifteenth day, such as acute dilatation of the stomach, ileus, pneumonia, and embolism.

CHART I

ANALYSIS OF 1,283 OPERATIONS PERFORMED UNDER SPINAL ANESTHESIA

Appendectomies	277
Cesarean sections	22
Cholecystectomies	97
Cystoscopies	120
Gastric and intestinal operations	72
Herniotomies (all types)	89
Laparotomies	39
Orthopedic (leg, hip, spine, etc.)	59
Pelvic	352
Prostatectomies and cystotomies	40
Radical breast amputations	8
Rectal	44
Miscellaneous	64
TOTAL	1,283

Nitrous oxide is an ideal anesthetic for short operations, but it does not afford the relaxation in major abdominal surgery that is obtained with spinal or even ether anesthesia. Furthermore, it so increases congestion and venous stasis as to frequently obscure the field of operation.

Along with many other clinics we have abandoned the use of ethylene because in our judgment it is incomparable as an anesthetic to local or spinal anesthesia, and because the surgeon should not be burdened with the responsibility of a possible explosion.

During the past year several other new anesthetics, or one might better say hypnotics, have received considerable attention. Of these sodium amytal has probably been the one most widely discussed and used in this country. Shortly after Zerfas and McCallum first reported the use of this drug, I had an opportunity of visiting their clinic and observing the effect of sodium amytal. The initial impression I received from observing the spectacular effect of a child going quietly to sleep within three minutes after the intravenous injection of the drug, was even greater than when I first observed Pitkin performing an open reduction of a child's femur under spinal anesthesia. After a year's study with sodium amytal in comparison to spinal anesthesia, however, I have come to the following conclusions:

With sodium amytal the patient is either unable to comprehend and coöperate, yet not sufficiently asleep to permit operating without the aid of nitrous oxide, or he is so deeply asleep that one is rather uneasy concerning his condition, while under spinal anesthesia the surgeon at all times has the patient's coöperation.

With sodium amytal it is impossible to have the patient cough or strain, frequently a valuable aid in doing a herniotomy. The addition of nitrous oxide causes the operating field to become more vascular and the risk of pulmonary complication is introduced.

CHART II

	1928 Aug. 1 to Dec. 31	1929 Jan. 1 to Dec. 31	1930 Jan. 1 to May 31
Operations in which spinal anesthesia was possible	342	1,253	498
Number given	79	893	346
Percentage	21	71	80

Delirium is frequently present so that the patient requires constant attention for hours following operation, an objectionable feature that is absent with spinal anesthesia.

In abdominal and pelvic operations relaxation is better than that obtained under inhalation anesthesia, but incomparable with that obtained under spinal anesthesia.

These comparisons are given in detail because at a number of meetings I have attended recently those present have been interested in the relative merits of these two methods of introducing anesthesia. Experience with sodium amytal was wisely limited to a small number of investigators by Zerfas and McCallum during the early months of trial. In spite of their precautions several fatalities may be directly or indirectly attributed to its use.

I have reached the conclusion that while sodium amytal will prove valuable, particularly as a hypnotic and as an anesthetic in certain operations about the face and mouth requiring the use of cautery, for major surgery, spinal anesthesia is greatly preferable. My observations on the use of avertin or tribromethanol, and pernoctin are limited, but in comparison with spinal

anesthesia I believe the same objections may be considered as with sodium amytal.

ADVANTAGES

In my opinion the introduction of spinal anesthesia into the daily operating routine is the greatest boon, not only to the surgeon but to the patient as well, that has taken place since the advent of aseptic surgery. The advantage to the patient is tremendous. If the operation is performed with average skill and within reasonable time the patient returns to his room almost as well as when he went to the operating table. Instead of being unconscious or even semiconscious with all the cells of the body drugged and the heart and lungs overtaxed, he is able to smile and talk to nurses and relatives. It is not unusual for the latter to be more perturbed than the patient. To prove how little the patient is affected by an operation we have even permitted a few to read or smoke.

From the hospital standpoint the problem of the after-care has been greatly simplified by the elimination of postoperative vomiting and unconsciousness. Relatives no longer spend anxious hours waiting for a patient to awaken from a prolonged inhalation anesthesia after a long operation. Fluids may be taken by mouth during and after the operation. There is no troublesome mucus in the throat, which is frequently present after an inhalation anesthetic. Since there is no retching or vomiting and consequent strain upon the wound, the patient suffers less postoperative discomfort and pain. Postoperative gas pains and distension are lessened because the intestines need not be forcibly walled off by sponges and handling.

The surgeon profits greatly. He is free from the worry of the ever-present danger of explosion. While close observation must be kept of the patient's condition, particularly as regards his blood pressure, yet there is less danger of sudden cessation of respiration than with nitrous oxide. Such occurrences are unusual in the experience of expert anesthetists, but the average hospital does not retain such highly trained anesthetists. If the blood pressure continues to fall after a spinal anesthetic in spite of the preoperative administration of ephedrine and adrenalin the repetition of either one or both of these drugs will control the situation.

As far as operative technic is concerned the surgeon's difficulties are immeasurably decreased. The abdominal wall, instead of being tight and rigid, is relaxed and the peritoneum can easily be lifted. When the latter is incised, the intestines do not well up into the wound but remain quiet and contracted, greatly simplifying the removal of a gangrenous or ruptured appendix or gallbladder, the release of an intestinal obstruction, or the anastomosis of the stomach and intestine. It is, of course, much easier to reach the source of trouble and eliminate it under these conditions. Closure of the wound is simplified by the relaxed abdominal muscles. Spinal anesthesia tends to eliminate the necessity for undue haste in any operation, since the patient suffers little shock. Patients stand long, critical operations far better under spinal anesthesia.

Some patients object to being awake during an operation, and it is simple enough to dull their sensations with the use of scopolamin and pantopon.

CONTRAINDICATIONS AND COMPLICATIONS

Spinal anesthesia is not devoid of danger if improper technic is followed, but we believe that fewer complications occur than with general anesthesia if the correct methods are used. In our first thousand cases there were no deaths which in any way could be traced to spinal anesthesia.

No patient has been refused this anesthesia during the past two years for any major operation performed below the clavicles. Cases of hypotension may be controlled by ephedrine. Central nervous system diseases such as brain tumor, or meningitis, neuro-syphilis, shock, and marked cardiac decompensation may be considered as contra-indications for spinal anesthesia.

Early in this series a number of postoperative headaches occurred, but with improvement in technic as developed by Stout and with the use of a small 22 gauge needle this objectionable feature has been almost eliminated. Postoperative pneumonia occurred in only three cases, although it was frequently necessary to perform emergency operations in the presence of acute respiratory conditions. Temporary paresthesias occurred in four cases among the first 1,000 patients, but have not occurred since. No permanent disability or lesion has resulted. The use

of ephedrine or adrenalin will check the fall of blood pressure and consequent nausea; carbon dioxide is a useful adjunct.

No attempt has been made in this discussion to cover the subject of technic which has been developed through the efforts of Labat, Jonnesco, Pitkin, Babcock, Koster and Stout. The latter in particular has done splendid work.

I wish merely to show the great satisfaction which we have obtained from using spinal anesthesia in our daily operative experience in the past two years. We are convinced that it is not a transient fad, as the experience of others as well as ourselves has shown it to be the most satisfactory anesthetic when properly used.

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EYE, EAR, NOSE, AND THROAT ANESTHESIA*

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As in operations in other fields, anesthesia for the eye, ear, nose, and throat may be divided into general and local. The technic of anesthesia in general is so amply covered in this symposium that it will not be taken up in this discussion. We will endeavor to bring out such modification as necessary for these special fields and to give the members of this association the results of our experience and conclusions drawn from the administration of anesthesia, both general and local.

GENERAL ANESTHESIA FOR THE EYE

Operations in the field of ophthalmology are so generally performed under local anesthesia that the subject of general anesthesia will need only brief discussion. There are times, of course, when any operation on the eye—cataract alone excepted—must be performed under a general anesthetic and in these rare instances ether is the anesthetic of choice. For short operations gas-oxygen anesthesia is used by preference. We use general anesthesia for small children and occasionally at the request of the patient having such major operations as enucleation. By use of a preliminary hypodermic of morphine even the "nervous type" of patient will usually be operated quite satisfactorily under local anesthesia. On account of the location of the work, special technic has to be used to keep the field sterile. After the patient is sufficiently under the anesthetic, the face is prepared and covered by sterile towels and gauze. The anesthetist may then render himself sterile or give the anesthetic while keeping himself well outside of the field of operation. This we accomplish by having the operator's assistant manage the head while the anesthetist uses a sterile towel so folded to fit over the nose, the remainder of the towel acting as a handle to the improvised cone.

LOCAL ANESTHESIA FOR THE EYE

We now limit our use of local anesthetics in the eye to the five following drugs: Cocain, butyn, novocain, holocain, and dionin. There have been introduced at various times numerous substitutes, such as eucain, acoin, stovain, alypin, and others. Our experience is that there are no real substitutes for the first five named.

Cocain is, of course, the outstanding anesthetic in ophthalmology. This is generally used in two and four per cent solutions. A drop of 4 per cent cocain every four minutes, for four or five instillations, will suffice for the average intraocular operation. Where there is congestion, sufficient adrenalin is used to counteract it. In operations on the globe, one drop of adrenal extract is usually sufficient. A 10 per cent solution of cocain is always kept on hand and is used in rare instances where the eye remains sensitive after the use of the 4 per cent solution. The 10 per cent solution is also valuable in strabismus operations to instill along the muscles after the conjunctiva is open and before manipulation of the muscles has begun. For injection for local anesthesia about the eye, we use 1 per cent cocain solution containing three to five drops adrenalin and use this for all purposes where no more than 1 c.c. of solution is required. This is particularly adaptable for extirpation of the lacrimal sac and plastic lid operations of minor degree.

Where infiltrations are made, novocain is used in place of cocain and in solutions from 1 to 2 per cent. For infiltration of any extent for plastic work, 2 per cent novocain solution is used in conjunction with the usual amount of adrenalin. Where large absorption may be expected, such as local anesthesia for enucleation, we use 1 per cent novocain with adrenalin.

Holocain in 1 per cent solution is used routinely only to anesthetize the cornea before taking readings of intraocular tension.

Butyn, in 2 per cent solution, we have found to be a very useful local anesthetic in office practice, for foreign body removal, and for minor operations upon the surface of the eye.

We have found dionin very useful for pain and irritation, particularly where the inflamma-

*Read at the annual meeting of the Minnesota State Medical Association, Duluth, Minn., July 16, 1930.

tion is deep-seated and subacute or chronic. In cases of low grade iritis or uveitis, the patient is given a 2 per cent solution of dionin and instructed to use one drop three times daily in the painful eye. There is first an inflammatory reaction, followed by analgesia which may last for several hours. The eye establishes an immunity so that the strength of the solution is increased with each subsequent one-dram prescription. In some cases this may reach 10 per cent.

GENERAL ANESTHESIA FOR EAR, NOSE, AND THROAT

Ether is used for children under twelve, and occasionally is necessary for adults. With rectal or intravenous administration we have not had experience. We believe that gas-oxygen anesthesia for tonsillectomy has no place.

LOCAL ANESTHESIA FOR THE EAR

For anesthetizing the ear drum or skin of the external canal, we use a mixture of equal parts of cocain, phenol, menthol, glycerine and alcohol. A pledget soaked in this solution is left in the canal for fifteen minutes. This is suitable for polyps of the middle ear, and furuncles of the canal. For paracentesis of the drum, it is not reliable, and we prefer gas-oxygen anethesia.

LOCAL ANESTHESIA FOR THE NOSE

For all intranasal work, we use block anesthesia. Cotton applicators are soaked with cocain flakes moistened with adrenal extract. Two are inserted up to the roof of the nose, parallel to the outer slope. This blocks the anterior nasal nerve. Another pair are pushed back to the posterior tip of the middle turbinate to block the sphenopalatine ganglion. Before inserting these, the nose is sprayed lightly with a two per cent solution of cocain alternating with a 1:2,000 solution of adrenal extract. The anterior applicators must be made very thin, otherwise there is difficulty in finding room for them.

We believe this method has every advantage over the method of direct application of cocain solutions to the mucous membrane. Certainly there is less absorption of cocain, because of the small area involved. In septum operations, there is no trauma to the septal mucous membrane.

LOCAL ANESTHESIA FOR THE THROAT

For tonsillectomy, we think that cocain has no equal. We use eight c.c. of a 0.2 per cent solution, with twelve drops of 1:1,000 solution of adrenal extract added just before injection. This mixture gives a more certain anesthesia than novocain. Also, there is decidedly less bleeding. The occasional failure of novocain and similar drugs to produce a complete anesthesia in tonsillectomy is injurious to one's reputation.

The addition of the adrenal extract is all-important. The only poor results we have had were when we used adrenal extract not sufficiently fresh. Twelve drops may be more than is usually used, but we believe that this quantity assures freedom from absorption of cocain.

Our method of preparing the solution is as follows: a 4 per cent stock solution of cocain is made and kept about two weeks before use, when it will be sterile from starvation of any organisms that may be present. In order to assure relatively sterile precautions, we make this solution ourselves in the office. It is made up in camphor water to keep out fungus growths. In the operating room this is diluted with sterile salt solution, first to one per cent, then to two-tenths per cent.

Over a period of thirteen years we have had no disturbing, toxic effects from cocain in tonsillectomy.

CONCLUSIONS

1. Local anesthetic is the anesthetic of choice in eye, ear, nose and throat operations.
2. Cocain remains the most important anesthetic.
3. No undesirable results have been observed from cocain combined with adrenal extract when exhibited in proper dosage.

THE ANESTHESIA PROBLEM AS RELATED TO LOCAL ANESTHESIA*

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FOR many years we have been bombarded with that euphonious term "selective anesthesia." The idea of the "selection" of the exact type of anesthesia from among the many excellent methods (individual and combined) that are now available, is so intriguing, that it is small wonder that he who advocates such a routine finds his audience properly attuned and in thorough agreement with his suggestions.

When, however, one visits the various clinics throughout the country and critically observes the methods being followed, he will find as a rule that, except in rare instances, every surgeon or group of surgeons is apt to be "wedded" to *one* or seldom more than *two* types or methods of anesthesia. The fact is that most surgeons use the method which, in their hands, or under their surgical environment, gives them the greatest satisfaction. The term "environment" is used advisedly as it is believed one's surgical environment or his special training are the most frequent causes for choosing any particular type of anesthesia. Those in control of the institutions in which they operate may choose the anesthetic, but the majority of surgeons are under no such control. Thus many surgeons are not exactly free agents. Furthermore, the anesthetic which is the *safest* in one institution is not necessarily so in another.

A certain percentage of institutions are so equipped that many methods may be tested out and compared. Unfortunately, such institutions are in the minority. Likewise, as a rule, surgeons are prone to accentuate the advantages of the particular anesthetic they are using. This is but natural. These considerations must be taken into account when evaluating the merits of the various types of anesthesia, as few surgeons are so fortunate as to be able to test them individually and give unbiased opinions. There may be a "best" anesthetic for every individual case, but the difference in opinion regarding it is apt to be influenced by the above-mentioned factors. Every known anesthetic has both advantages and disadvantages and many of the former are directly due to the excellence of technic of administration.

Probably no anesthetic possesses such outstanding qualities that it should be used quite universally and yet it is probably true that certain individuals or groups may use *one* method to the exclusion of all others with an increased margin of safety.

In choosing an anesthetic, two of the above points must be kept in mind: The surgeon's ability to bring to his patient *safe* general anesthesia, or to use the "local anesthesia method" *safely, skillfully* and *successfully*. To the writer's mind, this amounts to employing "selective anesthesia" in the superlative degree.

Obviously, if a surgeon is not properly equipped to offer to his patients the greatest safety, comfort and efficiency with local anesthesia, some other type should be used. In the final analysis, therefore, it is, as a rule, not the *anesthetic* so much as the *anesthetizer*, that counts in the choice of an anesthetic.

The writer believes that the frequent disagreements regarding local anesthesia have occurred because the spoken term meant one thing in some instances, and in others something else again.

For instance, if one were able to perform a hysterectomy or a cholecystectomy or reduce a fracture† as satisfactorily under local anesthesia as the excision of a small skin tumor, all would agree, perhaps, that "selective anesthesia" would indicate its use for these major procedures. There should, therefore, be no objection to this choice if made by one who *can* accomplish this feat. And yet it is those who *cannot* accomplish this feat who offer the objections to the use of local anesthesia in just such instances. Is it not possible that we have been conversing in different languages? That those who have not mastered

*Read by Dr. W. N. Graves at the annual meeting of the Minnesota State Medical Association, Duluth, Minn., July 16, 1930.

†For over twenty years the writer has reduced more than 98 per cent of his fractures under local anesthesia. Muscular relaxation is one of the outstanding results of this method.

the art of local anesthesia for major surgery, have "selected" some general anesthetic on this account? For those who *can* employ this anesthetic satisfactorily in certain operations, should it not be the one of choice? Is not this often the real point of controversy between those who favor general over local anesthesia and vice versa? Is it not a fact that when one listens to speakers upon this subject, he should consider *who* is doing the speaking and exactly the type of work the speaker is capable of doing? Must it not be admitted that in certain hands *local* anesthesia is the one of choice, while in others—especially those who have access to ideal general anesthesia, and have not mastered the technic of local anesthesia—the "selective anesthesia" of choice should be *general* anesthesia?

When the profession realizes and admits these facts there will be far less controversy concerning the subject of anesthesia. One longs for the day when *all* will use the *same language* when speaking of anesthesia—especially *local* anesthesia.

There are surgeons who: (1) can employ local anesthesia ideally in a vast percentage of all types of cases; (2) can obtain ideal general anesthesia; (3) cannot give local anesthesia well and can only poorly control the administration of general anesthesia.

Obviously, these three classes of surgeons—and they merge into one another—look upon the subject of anesthesia from different viewpoints. Provided what the writer has said is true, their varying viewpoints are easily explained and understood. The most desirable "selective anethesia" is that which, in the hands of the surgeon who performs the operation, gives the patient the greatest protection and comfort—at the same time permitting the best opportunity for meeting the indications. For a particular operation, local anesthesia may be *ideal* in the hands of one surgeon and a *fiasco* with another.

A number of years ago, the writer took part in a symposium before the American Association of Anesthetists. One speaker (an Englishman) asserted that chloroform was the anesthetic of choice and "proved" his point by mentioning the shortcomings of all other anesthetics. We then heard extolled the advantages of ether, nitrous oxid, nitrous oxid and ether, nitrous oxid and local, ethylene, spinal, and finally the writer attempted to explain wherein they were *all* wrong and that *local* anesthesia was usually the method of choice. Paradoxical as it may seem, we may *all* have been right—under certain circumstances, while under others, we *all* may have been wrong. The writer believes that this is the crux of the anesthesia problem today.

A few words regarding local anesthesia may be apropos. There are three distinct methods of applying this anesthetic and the writer believes that local anesthesia has no successful competitor when the all-important question of safety is considered; and when all is said and done, *safety* is the factor which is of the greatest importance. The three methods are as follows:

1. Spinal or intradural.
2. Regional or conductive.
3. Infiltration or infiltration block.

The subject of spinal anesthesia has been ably considered by our guest, Doctor Jackson.

The *regional* is the ideal method of applying local anesthesia, in instances in which it applies, as in intercostal, sacral, trigeminal, brachial and occasionally in the extremities. While ideal when indicated, its field of application is somewhat limited and the failures of novices who attempt to follow the teachings of the experts have done more to retard the use of local anesthesia than have the so-called "extravagant claims" of those who have mastered the technic of local anesthesia.

The third method, *infiltration* anesthesia, has by far the wider field of application and its technic is more simple, more easily taught and acquired and gives a higher percentage of success than does regional. It is the writer's belief that when surgeons master the technic of infiltration anesthesia and the *surgical technic necessary to make it a success,* local anesthesia will be more widely accepted.

Of course we shall always be confronted by that ephemeral specter, "psychic shock." And yet if the entire public were convinced that they were being operated upon in the *safest* possible manner and fully believed this to be the ruth, one wonders how great a part psychic shock would play. It is significant that reports of excellent results following sacral anesthesia combined with suprapubic infiltration with novocain, for the operation of prostatectomy, are now coming from the very clinic that has stressed the dangers of "psychic shock" to the *n*th degree. One wonders why patients with enlarged prostates

are not also victims of psychic shock as well as other classes, yet this factor is ignored in these reports. Aside from exophthalmic goiter, psychic shock should play as great a rôle here as in any type of surgery. The same is true in hernia.

The writer, after operating upon several thousand conscious patients, must confess his inability to recognize this entity—provided the patients were properly handled before, during and after operation and were not compelled to suffer *pain.*

As a good example, we might even take the bad case of exophthalmic goiter. Why is it that these patients often lie quietly during the induction of local anesthesia (provided this is made painlessly) and the early steps of the operation, only to "go to pieces" or show what the writer presumes is "psychic shock" when the gland is mobilized and the "deep" portion of the operation is being carried out?

The writer believes that it is due to failure to obtain *complete anesthesia* of the *deeper structures.* He has consistently operated upon these patients, sending them back to bed with a slower pulse, and apparently in better condition, than before operation—except when he failed to obtain complete anesthesia, or was guilty of committing some other surgical or psychic insult to the patient. Pain, unnecessary noise, traction, choking, pressure, an uncomfortable position, or some other type of insult have been the usual reasons for trouble in all types of cases.

In conclusion, the writer wishes to stress the following points:

The patient is entitled to the anesthetic that gives the acme of *safety, comfort* and *efficiency* of operation.

"Selective anesthesia" is frequently a misused term.

The surgeon's particular *environment* is closely associated with the choice of an anesthetic, and this is a far more important criterion than the particular type of anesthetic employed.

It is not nearly so important to select the drug as to know *by whom* it is to be administered—*and how!*

Local anesthesia, properly administered and accompanied by the necessary *finesse* in surgical technic, is the *safest* anesthesia yet discovered.

Patients' fear is, to a large extent founded upon reports of the improper use of local anesthesia.

So-called "psychic shock" as a result of operating under local anesthesia is, as a rule, a manifestation of *pain* or *errors in local or surgical technic, or management of the patient.*

In the writer's experience, thousands of completely conscious patients of all ages have not shown this complex, when handled ideally and properly managed and operated upon *without pain.*

Infiltration anesthesia (except when regional is indicated) is the local method of choice and if properly injected and reinforced by special surgical technic and ideal psychic management will, in trained hands, permit the ideal performance of a wide range of operations.

Under the requisite environment, "selective anesthesia" will point to local anesthesia as the method of choice in a vast percentage of operations, both minor and major.

When choosing any anesthetic we should "select" its *best* fruits—not its *abused technic*—as our *standard.*

In choosing an anesthetic, the *drug* is secondary in importance to the *anesthetizer,* and when using local anesthesia, the *type of surgical* technic may be, and frequently is, more important in insuring a successful issue than the local anesthesia technic.

LOCAL ANESTHESIA*

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THE past ten years has seen a very great tendency towards other methods than general inhalation anesthesia. The use of intravenous and spinal anesthesia has increased rapidly in popularity. However, the writer feels that there is no contest between the various methods of producing anesthesia but that the choice should rest with the judgment of the operator as to the type of anesthesia to be employed in any given case. In the healthy, robust individual, almost any anesthetic will suffice; but in the seriously ill, profoundly toxic, or substandard risk, local anesthesia is undoubtedly still the safest procedure. We believe that the profession as a whole prefers to avoid general anesthesia if possible, and even the most ardent advocates of spinal anesthesia warn against its use in the profoundly toxic patient.

In the recent advances in the surgical treatment of acute nephritis, local anesthesia plays an important part. Here again we are dealing with the critically ill patient and the anesthetic is of vital importance. For more than sixteen years we have used some type of local or regional anesthesia in the treatment of fractures. We have repeatedly used the brachial anesthesia for arm and forearm fractures, and infiltration directly into the site of fracture when this type of anesthesia is indicated.

We personally watched Babcock perform, under local anesthesia, a colostomy on a long standing intestinal obstruction with severe toxemia and fecal vomiting, and operate upon another patient with a ruptured appendix, peritonitis and a secondary abscess, causing an intense toxemia.

Matas states that as a rule he never resorts to spinal anesthesia in weak, exhausted and hypotensive subjects. We would quote Labat as follows:

"The wholesale use of spinal anesthesia should be discouraged and its application throttled down to surgical necessities. Its simplicity of technic and clinical advantages over all the other methods of anesthesia have served in the past to stimulate its routine administration by the inexperienced. It was given to all classes of patients for all types of operations."

Although Koster states that he has not had a fatality attributable directly to spinal anesthesia, nevertheless he reports four fatalities as possibly having been contributed to by spinal block. One was an old man with obstruction, the second a diabetic with spreading gangrene, the third a child of six with obstruction from Meckel's diverticulum, and the fourth a suppurative peritonitis with myocarditis. If we are to judge by the teaching of many, these are the cases not suitable for spinal anesthesia.

The writer has repeatedly used other forms of anesthesia and believes firmly that one must not be wedded to one type of anesthesia to the exclusion of all others. In other words, we agree explicitly with Matas when he states that in the matter of anesthesia one should be selective and eclectic and not a routinarian.

After all, is it not true that one of the greatest factors leading to the success of local anesthesia is that the surgeon cannot traumatize tissue with impunity? He cannot, for instance, pull upon the abdominal viscera and maintain a negative intra-abdominal pressure. By demanding far greater respect for the tissues and a much more painstaking and refined technic, local anesthesia helps to prevent shock and affords a less stormy convalescence. We have used local anesthesia alone; with morphine and scopolamine, hypodermically (Farr's narcolocal anesthesia); likewise with gas to produce the anoci-association of Crile; and we have also repeatedly used it in conjunction with spinal anesthesia. We have seen surgeons operating with an incomplete spinal anesthesia, the lower abdomen, for instance, being completely anesthetized, but the anesthesia in the upper abdomen being incomplete, requiring the additional administration of gas or ether. We have likewise seen and experienced the waning of perfect spinal anesthesia due to a prolonged surgical operation in which general anesthesia had to be added. We have

*Read at the annual meeting of the Minnesota State Medical Association, Duluth, Minn., July 16, 1930.

found, however, that the addition of splanchnic block to the stomach or gallbladder and an infiltration of the sensitive portions of the abdominal incision have permitted us to complete a much drawn out surgical operation in which the spinal anesthesia waned or was incomplete. We would strongly recommend the use of local and splanchnic anesthesia under such circumstances.

Novocain has been so efficient, so free from danger, and of such minimum cost, that it has been almost universally accepted for local anesthesia. Many newer drugs have arisen, but until it is proven that their advantages supersede those of novocain they should not be substituted. Solutions of 1 per cent for infiltration anesthesia and 2 per cent for nerve blocking have, in our hands, proven most efficient. Solutions should be prepared in large quantities from accurately weighed novocain crystals, rather than from the tablets, which are more expensive and less likely to be sterile. Adrenalin, in quantities from two to three minims per ounce, prolongs the anesthesia, reduces absorption and likewise toxicity. This addition is best avoided in cases of hyperthyroidism.

Regional anesthesia and nerve blocking are far more difficult and in most instances possess no advantages over straight infiltration and infiltration block anesthesia. Because of its greater simplicity, the ease of its induction and the fact that it carries a much higher percentage of success, infiltration anesthesia, when indicated or combined with blocking, is much more practical in the hands of the general practitioner and the general surgeon. We believe that it is extremely important that the anesthetic solution be injected by the operator and there are now scattered throughout the country many excellent surgeons in small clinics, where the general anesthetist is not so well trained, who are doing the greater portion of their major surgery under local anesthesia.

It is needless to say that proper equipment is paramount; good syringes with fine needles cannot be displaced by leaky syringes with poorly fitting, dull aspirating needles. One must constantly bear in mind that the patient who is awake may soon become uncomfortable and object more to his position upon the table or the binding straps upon the arms than to the operation itself, and his comfort is an important consideration.

General Technic.—The technic of local anesthesia and local anesthesia combined with infiltration block is so simple that it can be used by any surgeon who is willing to master its details. If the injecting needle is always kept in motion and the solution projected ahead of the needle, the advance of the needle will be painless and safe. If, however, the needle is plunged into the tissues without the solution being projected ahead of it and a large injection made with the point of the needle stationary, the procedure will be painful and may be dangerous if the point of the needle should penetrate a vein. It has been advanced that this explains the fatalities from local anesthesia in throat operations, where a very fine needle may easily be plunged into the venous plexus behind the tonsil and an intravenous dose administered.

Technic of Injection.—A very fine needle is used to make the primary wheal at the edge of the operative field. From this wheal, secondary wheals are made by bringing a longer needle into the skin from below. In this manner all secondary wheals are made painlessly. The patient should feel in the skin only the first needle prick and not a succession of wheals, as illustrated in a recent textbook on umbilical hernia, which only causes loss of confidence in method. When it comes to anesthetizing the abdominal wall through the primary and secondary wheals the underlying layers have been thoroughly infiltrated. Similar infiltration of the line of incision together with the blocking of the ilioinguinal and iliohypogastric nerves and a subsequent block of the genital branch of the genito-femoral, when the cord is uncovered, is adequate for the repair of any inguinal hernia. The same method applies to work upon the extremities when, for instance, the leg is circumscribed and an infiltration block is made of the nerve trunks, rendering everything distal to the point of injection completely anesthetized. By this procedure we have been able to treat fractures by the open or closed method, to perform amputations, etc. The same infiltration whether circumscribing the thyroid gland or, as we now usually do, infiltrate radially from a central puncture in all directions, combined with a blocking of the upper cervical nerves on both sides, will permit a painless removal of even the most difficult substernal thyroid. It is a wonderful comfort to the surgeon to have a patient talk during a thyroidectomy and

know the recurrent laryngeal nerves have not been injured. In the scalp or in the thorax, infiltration and infiltration blocking permit painless trephining or thoracoplasty. Infiltration along the line of incision and blocking of the lower four thoracics will permit delivery of the kidney and exposure of the pedicle, which itself may be readily infiltrated after it has been exposed. Nephrotomy by this technic is comparatively simple; nephrectomy is more difficult.

By the use of the infiltration technic as described, the abdomen may be opened with an entirely negative intra-abdominal pressure and without any expulsion of the abdominal contents. At this point, one must be resourceful in the examination of the various viscera through inspection rather than by palpation. With forceps or retractors, the abdominal wall is lifted, permitting the division of adhesions and the visualization of the gallbladder through a lower abdominal incision. In the Trendelenburg position, with vertical retraction, the pelvic organs may be visualized without the use of gauze packs. No attempt should be made to perform any intra-abdominal operation beyond this point without the addition of splanchnic anesthesia. This is probably the greatest step in the advancement of this method within the abdomen. With the colon and the omentum lifted upward, one may block the greater portion of the splanchnic nerves at the base of the transverse mesocolon, or segments of bowel only may be anesthetized. The appendix or the entire cecum and terminal ileum may be blocked or by following the posterior peritoneum at the brim of the pelvis, all of the splanchnics may be intercepted as they descend to the pelvic organs. When the uterus is free a local splanchnic blocking of both the broad and round ligaments and the peritoneum about the cervix will permit a painless hysterectomy. Likewise a local splanchnic blocking about the gall bladder and the peritoneum over the ducts will permit all types of operation in this location. We have removed the entire stomach, resected large portions of the colon, removed the gallbladder and performed the abdomino-perineal Coffey operation for cancer of the rectum by this method with entire satisfaction, even in some patients who were markedly substandard risks.

In conclusion, let me again state that we do not advocate the sole use of any type of anesthesia, but we firmly believe that local anesthesia has a definite field in all types of surgery and particularly in the substandard risk. We would also strongly recommend local anesthesia as an adjunct to incomplete or waning spinal anesthesia.

PULMONARY COMPLICATIONS OF GENERAL ANESTHESIA*

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I HAVE been asked to discuss general anesthesia with particular reference to its complications and have chosen to omit the gastro-intestinal, renal and general chemical complications such as acidosis and to consider for the purposes of this paper only pulmonary complications.

Just a few words about the explosion hazard. This is really a pulmonary complication, as death occurs from explosion within the lungs. With the use of the modern gases and apparatus there have occurred several disastrous or fatal explosions. Although ethylene is a most excellent anesthetic it has been discarded in many localities on account of its reputation, and yet in one or two places where accidents have occurred this gas is still used.

In the Journal of the American Medical Association of March 29, 1930, the Council on Physical Therapy of the A. M. A. published the report of its Committee on Combustible Anesthetics written by H. B. Williams of the Department of Physiology of Columbia University. He carefully reviewed the physical causes of explosions and outlined the precautions necessary to avoid ignition, some of which are practically impossible of general attainment but most of which can be incorporated in a well made apparatus or routinely practiced in well ordered operating rooms. His closing paragraph is as follows:

"Finally, I would state that it is my considered opinion after careful investigation that there is a real and serious hazard in the use of ethylene or ether in modern anesthesia apparatus, in which combustible gas or vapor is mixed with oxygen or nitrous oxide and contained in or passed through rubber rebreathing bags or rubber tubing. This hazard is greatly increased by the practice of washing out the apparatus and the patient at the end of the procedure with oxygen-rich mixtures." The whole report is helpfully warning but discouraging.

Rather in contrast to it is the later report published in the A. M. A. Journal of May 10, 1930, by the general A. M. A. Committee on Anesthesia Accidents. This report was drafted by the Chairman, Yandell Henderson of Yale. The committee included Lundy of Rochester, Minnesota, Scott of Rochester, New York, Wells of Chicago, and H. B. Williams of New York, who wrote the former report. This report of course also outlines all the dangers and necessary precautions, but after a survey of upwards of 200,000 ethylene anesthesias, they reach the conclusion that statistically there have not been more than about one explosion death per hundred thousand cases, which is negligible compared with other hazards of anesthesia, and with the advantages of ethylene over all other inhalation anesthetics. I myself feel that all suggested precautions should be met, with the exception of the prohibitory one of the grounded metal strips in the floor, and that ethylene is too valuable to be discarded until a more perfect gas is found.

Pulmonary complications stand out as one of the most important considerations in choosing an anesthetic and are still the paramount cause of post-operative morbidity and mortality.

Graham's recent work, "Surgical Diagnosis," gives figures for pulmonary complications in various clinics that differ rather widely, from .7 per cent in Pittsburgh to 4 per cent in Moscow. A part of this difference may be due to the omission in some series of minor coughs, etc., and complications which arose almost too late to be considered as possibly due to the anesthetic.

We have hurriedly reviewed 1,015 surgical cases at the University Hospitals. This is an unselected group except that nose and throat operations were not included. This is not a large enough series from which to draw very definite conclusions but certain impressions at least can be derived. All these cases were prior to the last four months during which time all patients have been hyperventilated after operation daily for six days.

Table 1 shows 30 pulmonary complications in the 1,015 cases. One patient developed bronchopneumonia on the fourteenth day after operation

*From the Department of Surgery, University of Minnesota. Read before the annual meeting of the Minnesota State Medical Association, Duluth, Minn., July 16, 1930.

and recovered. In another patient who recovered, atelectasis occurred on the eleventh day. One patient died on the tenth day, having gastric retention and vomiting as well as bronchopneumonia; one on the fourth day following a perforated appendix having general peritonitis and septicemia as well as bronchopneumonia; one on the twenty-second day after an acute mastoid operation with general septicemia as well as bronchopneumonia; and one died on the twelfth day of bronchopneumonia which did not, according to the records, develop until the ninth or tenth day. One could without much twinge of conscience omit these six cases including four deaths from the list of complications due to the anesthetic. I did have the temerity to exclude one bronchopneumonia death which occurred six weeks after a gastric resection under spinocaine.

TABLE I
ANESTHETICS

		Pulmonary Complications	Deaths
8	Novocaine	0	0
39	Novocaine, Nitrous Oxide	0	0
64	Novocaine, Ethylene	0	0
2	Novocaine, Ethylene, Ether	0	0
58	Spinocaine	0	0
6	Spinocaine, Nitrous Oxide	1	0
7	Spinocaine, Ethylene	0	0
6	Spinocaine, Ethylene, Ether	2	1
120	Nitrous Oxide	2	1
46	Nitrous Oxide, Ether	3	1
205	Ethylene	3	0
117	Ethylene, Ether	4	1
14	Ether, Colonic	0	0
15	Ether, Colonic and Inhalant	1	0
305	Ether, Inhalation	13	4
4	Chloroform	1	1
1015	Total	30	9

Of these four fatal cases, two received ether, one nitrous oxide-ether, and one ethylene-ether. The eleventh day atelectasis and the fourteenth day bronchopneumonia received ether. These will not be referred to again, but please remember charitably in looking at the following tables that these six cases might rightfully be omitted, reducing the nitrous oxide-ether and ethylene-ether pulmonary complications to two and three without a fatality; the ether to nine, with two fatalities; and the total to twenty-four, with five fatalities. In addition to the above, the one death after chloroform was due to bronchopneumonia following resection of the mandible. This seems more probably an operative rather than an anesthesia sequela.

The thing most noticeable in this table is the increase of the figures on the ether lines.

I have made cross reference tables for each anesthetic and for each body region operated upon but have largely consolidated them for this presentation. It will be noted that some of the types of anesthesia had no pulmonary morbidity. These were novocaine and spinocaine alone and with certain additions, 192 operations having been done on various regions under these anesthetics without pulmonary complication. The use of ether seems, according to this table, to increase the incidence of pulmonary complications.

TABLE II
OPERATIONS OUTSIDE OF ABDOMEN, UNCOMPLICATED

		Pulmonary Complications	Deaths
10	Head	0	0
2	Eye	0	0
17	Lip, Palate	0	0
34	Upper Extremity	0	0
28	Kidney, Ureter	0	0
53	Inguinal, Male Genitals	0	0
10	Rectum	0	0
48	Lower Extremity	0	0
6	Spine	0	0
17	Skin	0	0
225	Total	0	0

Now turning to the table on anatomical regions operated upon (Table 2), we see that there are a goodly number of regions where operations show no pulmonary morbidity, regardless of the anesthetic used. Upon these regions (the head, eye, lip and palate, upper extremity, kidney and ureter, inguinal region, male genitals, rectum, lower extremity, spine and skin), 225 operations were performed with various anesthetics without pulmonary morbidity. On the other hand, other regions (Table 3) bear the brunt of the pulmonary trouble. Three hundred ninety-five operations were performed on regions other than the abdomen with three deaths among nine pulmonary complications, while 395 other operations were performed within the abdomen, with six deaths among twenty-two pulmonary complications.

TABLE III
OPERATIONS OUTSIDE OF ABDOMEN, COMPLICATED

		Pulmonary Complications	Deaths
6	Ear, Mastoid	1	1
15	Bony Oral	3	1
156	Neck	2	0
43	Chest	1	1
29	Bladder	1	0
146	Cervix, Vagina, Perineum	1	0
395	Total	9	3

OPERATIONS, ABDOMINAL

		Pulmonary Complications	Deaths
141	Upper Abdomen	15	4
254	Lower Abdomen, Pelvis	6	2
395	Total Abdominal	21	6
1015	Grand Total	30	9

It would seem then that work within the abdomen, and especially the upper abdomen, incurs a greater risk of pulmonary complications than that in other regions.

Each anesthetic was tabulated according to body regions, and each region according to anesthetics used.

TABLE IV

	Pulmonary Complications	Deaths
EAR, MASTOID		
2 Ether Alone	1	1
3 Ether Reinforcement	0	0
1 Without Ether	0	0
6 Total	1	1
BONY ORAL		
6 Ether Alone	1	1
3 Ether Reinforcement	1	0
6 Without Ether	0	0
15 Total	2	1
NECK		
7 Ether Alone	0	0
12 Ether Reinforcement	1	0
137 Without Ether	1	0
156 Total	2	0

Table 4 shows the ear, mastoid, bony oral surgery and the neck. All but one of the five complications and both of the deaths followed ether anesthesia. Neck operations were practically free from pulmonary complications, one case of bronchitis following one of the twelve ether reinforced anesthesias, and one bronchitis following one of the 136 without ether.

TABLE V

	Pulmonary Complications	Deaths
BLADDER		
2 Ether Reinforcement	0	0
27 Without Ether	1	0
29 Total	1	0
CERVIX, VAGINA, PERINEUM		
2 Ether Alone	0	0
15 Ether Reinforcement	0	0
129 Without Ether	1	0
146 Total	1	0

Table 5 shows the operations on bladder, cervix, vagina and perineum, in which no trouble followed the administration of ether. It was given in nineteen of the 175 cases. In operations in this region there were only two pulmonary complications, and these without fatality—a pretty safe region to operate upon, pulmonarily speaking.

Table 6 shows operations upon the chest, upper abdomen and lower abdomen and again shows a much higher incidence in abdominal operations, especially in the upper abdomen, with an additional increase when ether was used. Strangely enough (a thought which had not occurred to me before), the morbidity and the mortality seem to be greatest when ether was used as a reinforcement to some other anesthetic rather than when it was used alone. Following abdominal operation hyperventilation with carbon dioxide on the days following operation produces quite severe pain in the operative field, indicating the reason for shallow respiration following this type of operation.

TABLE VI

	Pulmonary Complications	Deaths
CHEST		
6 Ether Alone	0	0
4 Ether Reinforcement	0	0
33 Without Ether	1	1
43 Total	1	1
UPPER ABDOMEN		
95 Ether Alone	10	2
21 Ether Reinforcement	5	2
25 Without Ether	1	0
141 Total	15	4
LOWER ABDOMEN		
117 Ether Alone	2	1
85 Ether Reinforcement	3	1
52 Without Ether	1	0
254 Total	6	2

Table 7 shows the results from spinocaine anesthesia with three complications occurring in upper abdominal operations only, and then only when inhalation anesthesia had been added.

TABLE VII

	Pulmonary Complications	Deaths
SPINOCAINE		
8 Upper Abdomen	0	0
16 Lower Abdomen	0	0
34 Outside of Abdomen	0	0
58 Total	0	0
SPINOCAINE, NITROUS OXIDE		
4 Upper Abdomen	1	0
2 Outside of Abdomen	0	0
6 Total	1	0
SPINOCAINE, ETHYLENE		
6 Upper Abdomen	0	0
1 Outside of Abdomen	0	0
7 Total	0	0
SPINOCAINE, ETHYLENE, ETHER		
6 Upper Abdomen	2	1
77 Grand Total Spinocaine	3	1

Table 8 gives operations with nitrous oxide and ethylene. The one complication which resulted in death followed nitrous oxide and was in a radical breast amputation. Bronchitis was the complication in the three cases following ethylene.

TABLE VIII

NITROUS OXIDE

		Pulmonary Complications	Deaths
9	Lower Abdomen, Pelvis	0	0
7	Chest	1	1
104	Others Outside of Abdomen	0	0
120	Total	1	1

ETHYLENE

5	Upper Abdomen	0	0
23	Lower Abdomen, Pelvis	1	0
33	Neck	1	0
61	Cervix, Vagina, Perineum	1	0
84	Others Outside of Abdomen	0	0
205	Total	3	0

After nitrous oxide and ethylene, with the addition of ether (Table 9), the incidence of pulmonary complications was higher, and again all the trouble followed abdominal work, the rate being higher when the upper abdomen was molested.

TABLE IX

NITROUS OXIDE, ETHER

		Pulmonary Complications	Deaths
3	Upper Abdomen	2	1
14	Lower Abdomen, Pelvis	1	0
29	Outside of Abdomen	0	0
46	Total	3	1

ETHYLENE, ETHER

12	Upper Abdomen	1	0
71	Lower Abdomen, Pelvis	2	1
34	Outside of Abdomen	0	0
117	Total	3	1

Table 10 is the story of ether compared with other anesthetics. When ether was used alone, upper abdominal operations were followed by almost five times as many pulmonary complications as lower abdominal and extra-abdominal operations. When ether was used as a reinforcement to other anesthetics, upper abdominal operations showed seven times as many complications as lower abdominal, and ten times as many as extra-abdominal operations. Other anesthetics used in upper abdominal cases gave only twice as many as in lower abdominal cases, and four times as many as for those outside the abdomen.

Comparing different anesthetics for the same regions:

Upper Abdomen.—Ether reinforcement resulted in over twice as many pulmonary complications as ether alone, and five times as many as other anesthetics.

Lower Abdomen.—Ether reinforcement was followed by twice as many complications as ether alone, and over 50 per cent more than other anesthetics. Ether alone was accompanied by even fewer complications than other anesthetics.

Extra-abdominal.—Ether reinforcement showed more complications than ether alone, and the latter twice as many as other anesthetics.

TABLE X

ETHER, INHALATION, ALONE

		Pulmonary Complications	Deaths
95	Upper Abdomen	9	2
117	Lower Abdomen, Pelvis	2	1
212	Total Abdomen	11	3
93	Outside of Abdomen	2	1
305	Total	13	4

ETHER, INHALATION, REINFORCEMENT

21	Upper Abdomen	5	2
85	Lower Abdomen, Pelvis	3	1
106	Total Abdomen	8	3
80	Outside of Abdomen	2	0
186	Total	10	3

OTHER ANESTHETICS WITHOUT ETHER

23	Upper Abdomen	1	0
48	Lower Abdomen, Pelvis	1	0
71	Total Abdomen	2	0
453	Outside of Abdomen	5	2
524	Total	7	2
1015	Grand Total	30	9

The thirty cases with pulmonary complications are shown in more detail in Table 11. These included 1 case of pleurisy with effusion, 2 of atelectasis, 9 of bronchitis, 4 of lobar pneumonia with 1 death, and 15 of bronchopneumonia with 8 deaths. Ages ranged from 7 to 72; in the fatal cases from 12 to 69, the average for both being 48. Eighteen of the 30 patients were over 50; 12 over 60. Six of the 9 fatalities were over 50; 4 over 60. The duration of the anesthesia in the 30 cases was from 25 to 185 minutes; in the 9 fatal cases from 40 to 125 minutes. The average in both was 80 minutes.

TABLE XI

PULMONARY

	Complications	Deaths
Pleurisy	1	0
Atelectasis	2	0
Bronchitis	9	0
Lobar Pneumonia	4	1
Broncho-Pneumonia	14	8
Total	30	9

AGES: 7 to 72; average, 48. 18 over 50; 12 over 60.
FATAL CASES: 13 to 69; average, 48. 13, 17, 29, 56, 59, 62, 62, 67, 69.
ANESTHESIA: 25 to 185 min., average 80.
FATAL CASES: 40 to 125 min., average 80.

Conclusions: A review was made of 1,015 anesthesias administered at the University hospitals. Pulmonary complications followed in 30 cases (3 per cent), with 9 deaths (0.9 per cent).

Six of the complications, including 4 deaths,

night easily be considered either as occurring too late to be related to the anesthesia or as being a part of a general septicemia, related to the surgical condition rather than to the anesthesia.

Ether administered alone caused about twice as many pulmonary complications as other anesthetics.

Ether used as reinforcement to other anesthetics caused five times the pulmonary complications in upper abdominal operations, twice as many in other types of operations.

Upper abdominal operations, as compared with extra-abdominal work, were followed by pulmonary complications ten times as frequently with ether reinforcement, five times as frequently with ether alone, and four times as often with other anesthetics. This indicates that ether is a potent factor in pulmonary complications, but that the upper abdomen as an operative field is a still more important consideration.

Ethylene causes less pulmonary irritation than any other inhalation anesthetic, and this feature is in fact almost negligible.

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SOME CLINICAL FEATURES OF OBSTRUCTIVE JAUNDICE*

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ANY physician who has studied the symptoms of many patients with jaundice will agree that the diagnosis is difficult if only because the clinical pictures encountered in actual practice do not often resemble the classical ones described in the textbooks. Much information is needed as to the frequency with which variations in the classical picture can be expected to occur; the atypical cases also deserve particular study. In an effort to clarify, in our own minds, the problem of differential diagnosis in cases of jaundice, we have analyzed the records of 130 cases of obstructive jaundice which have been carefully studied during hospitalization at The Mayo Clinic.

THE CLASSIFICATION OF JAUNDICE

Since Mann and his associates have proved conclusively that bile pigment is formed outside of the liver and is brought to it for excretion, we have learned to classify clinical cases of jaundice into three groups (McNee): (1) obstructive jaundice, including cases in which there is occlusion of or obstruction in the extrahepatic biliary passages; (2) intrahepatic jaundice, comprising cases in which the lesion lies in the hepatic parenchyma, either in the finer bile passages or in the cells of the liver itself, and (3) hemolytic jaundice, associated with increased destruction of blood cells and subsequent increase in the level of bile pigments in the blood (Fig. 1). Each of these groups presents a different therapeutic problem, and consequently a quick method of classification of any given case of jaundice is highly desirable. The points essential to a working classification, according to McVicar and Fitts, are as follows: "(1) The reaction of the jaundiced serum to the van den Bergh reagent (whether direct or indirect); (2) the height and behavior of the serum-pigment curve as determined by the van den Bergh test or by the icterus-index method; (3) the quantity of bile reaching the intestines as determined by siphonage of the duodenal contents, and (4) the presence or absence of pain, and its character when present."

With these data on hand, one usually can arrive at a working diagnosis in most cases of jaundice. If an anatomic diagnosis cannot be made positively, at least the obscure cases can be divided into surgical and nonsurgical groups. The significance of such prompt classification is obvious, when one recalls the injury which obstructive jaundice causes to the biliary passages and the hepatic parenchyma.

In attempting to diagnose the cause of jaundice, one should recall the percentage distribution and frequency of the various types as they are encountered in practice. In 450 cases of jaundice at The Mayo Clinic, Hartman found that in approximately 23 per cent the lesion was intrahepatic, in about 7 per cent the disease was of the hemolytic type, and in the remaining 70 per cent obstructive lesions of the hepatic or common bile ducts were present. Carcinoma accounted for about 25 per cent of the cases; of these, malignancy of the pancreas was the most common single cause, and tumors of the gallbladder and bile ducts taken together were about half as common. Metastatic lesions and general carcinomatosis accounted for a total of about 7 per cent of all cases of jaundice. Of the benign lesions, stones in the common bile duct were responsible for 20 per cent and stricture of the common or hepatic ducts for 10 per cent. From the foregoing, it is apparent that the three conditions which should be thought of first in attempting a differential diagnosis in a case of jaundice are intrahepatic jaundice, carcinoma, and stone in the common bile duct.

STONE IN THE COMMON BILE DUCT

Our series of patients with stone in the common bile duct comprised seventy-one. In this group the usual predominance in females was noted (a ratio of about three females to two males). The average age of the patients was fifty-five years, and the average duration of

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symptoms, six years. About a third of the group had had previous surgical operations on the biliary tract.

The essential characteristics of jaundice due to stone in the common bile duct are that it is intermittent, painful, rarely complete, and that

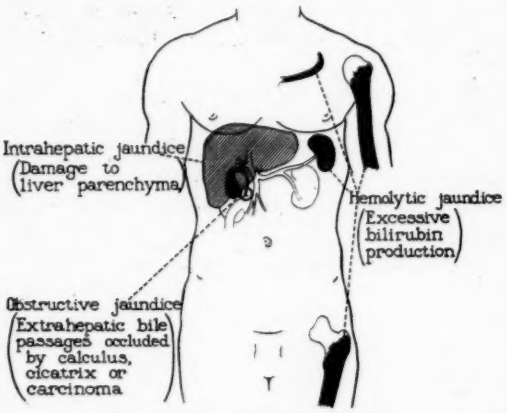

Fig. 1. Various types of jaundice.

the associated symptoms are usually of long duration.

Analysis of the symptom of pain in this group of cases brings out a number of interesting points. Forty-nine of the patients had had typical biliary colic; seven had had violent seizures of epigastric pain; one patient had had definite colic situated in the left upper quadrant of the abdomen, and another patient had had only lumbar pain. Diffuse abdominal pain, without accurate localization, was noted in seven cases. In six cases the jaundice was painless or practically so. From the foregoing, it appears that in nearly 30 per cent of cases of stone in the common bile duct, the pain is atypical in its localization or nature, or so mild that it is only a minor feature in the case. In all but six cases, however, the character of the attacks was such as to suggest either actual colic or its equivalent. The relation of these painful seizures to the appearance of jaundice is significant. In fifty-five of the seventy-one cases, jaundice followed immediately after the attack of pain. In ten cases, the jaundice came on shortly after what might be termed the equivalent of colic. In the remaining six cases, there had been too little pain to connect it accurately with the history of the onset of jaundice, although in all of these cases, general malaise, chills, nausea and vomiting, and other minor symptoms were associated with the first appearance of the jaundice. In a large majority of cases, painful attacks, of whatever type, were followed by residual soreness, nausea, and vomiting. Chills and fever were noted in about half of the cases, and pruritus in more than half; usually these symptoms were at their height shortly after an attack of pain. These associated phenomena are often helpful in identifying the cause of atypical colic. About half of these patients had had attacks of pain and jaundice prior to the attack which brought them to the clinic for relief, and frequently inquiry into the nature of these earlier and half-forgotten attacks afforded us most valuable information.

There are two features about the clinical picture of stone in the common bile duct which have not received much attention. The first feature is the tendency of the attacks to increase in frequency and severity; this is a striking point in many histories. The second feature is indigestion, which often antedated by years the attacks of pain. In all but four in this group of seventy-one cases, there was a long history of intolerance to food, postprandial distress, flatulence, and so forth. Just as a patient with pyloric obstruction frequently will forget to mention the original symptoms of ulcer, so do these persons with jaundice due to stone in the common bile duct forget to mention the old symptoms of indigestion and abdominal distress which characterized the onset of their illness.

The importance of determining the patency of the biliary passages in obstructive jaundice has been emphasized by Crohn. This information may be obtained by duodenal siphonage or by examination of the stools; the patient's statements alone rarely can be relied on to decide this question. In our cases of stone in the common bile duct, bile was present in the material obtained by duodenal drainage in 80 per cent of the cases in which intubation was performed, and examination of the stools furnished confirmatory evidence in many cases. In only ten cases of the whole group was there evidence of complete biliary obstruction, and in these it is not certain that a longer period of observation and more frequent duodenal drainage would not have revealed at least a trace of bile. Our impression is that it is not common for a stone completely to occlude the biliary passage for any length of time. In many cases drainage of bile has been absent on

the earlier tests, but after a few days bile appeared in the stools or on duodenal siphonage.

The incomplete and intermittent nature of the biliary obstruction is reflected in the curve of serum bilirubin. In about 70 per cent of the cases the values for serum bilirubin do not at any time exceed 15 mg. for each 100 c.c. In about a third of the cases it was not more than 5 mg. at any time. This is in notable contrast to the levels of serum bilirubin encountered in obstructive jaundice due to carcinoma. Frequently a sharp rise in the serum bilirubin after a painful attack will serve to establish the fact that a stone is present. Other laboratory data do not give very helpful information. Cholecystography with the use of dye is of little value in the presence of jaundice; roentgenograms of the region of the gallbladder occasionally may reveal a stone. Severe anemia is uncommon, although in about 40 per cent of our cases there was some reduction in the concentration of hemoglobin and in the erythrocytes; leukocytosis may be present during the acute attack, but usually it subsides speedily. The coagulation time was within normal limits in all but eight cases; in these it was definitely prolonged, but usually was less than twenty minutes. There was no definite correlation between the coagulation time and the severity of the jaundice, and occasionally we have noted a hemorrhagic tendency in cases in which the coagulation time was within normal limits.

Numerous variations from the typical picture are encountered; in fact, about a third of all cases of choledocholithiasis may be atypical in one or more respects. Jaundice may be absent following colic in some cases; Jordan and Weir are reporting a group of proved cases of this type. Cases of recurrent stone also give difficulty; five patients in this group gave a history of choledocholithotomy done elsewhere, with subsequent reformation of stones. The cases which give the most trouble in diagnosis are those in which patients are older, the history is short and pain is atypical. To establish a positive diagnosis in this group, one must often resort to exploration. Fortunately these cases are rare, but some of them have so many of the characteristics of neoplastic obstruction of the duct that they present difficulty in diagnosis.

The relative frequency of the symptoms and signs of stone in the common bile duct are shown in Table 1. The complications which may accompany obstruction of the common bile duct by stone are of interest because of their bearing on the clinical picture and their effect on surgical risk. In this group, perforated or ruptured gallbladder occurred in four cases; fistulous connections with the duodenum or colon were present in three cases, and an external fistula was noted in two cases. Biliary cirrhosis was often found at operation or at necropsy. Inflammatory conditions of the bile ducts were less common. In two cases subdiaphragmatic abscess followed operation. Chronic pancreatitis was present in nine cases, and hemorrhagic pancreatitis in two. In jaundice due to stone, considerable hemorrhage is not as common as one might expect. In only one case was it the apparent cause of death. In fifteen of this group of cases renal insufficiency occurred as a complication either before or after operation. As a rule, it was only moderately severe and could be controlled by intravenous administration of fluids.

TABLE I

JAUNDICE DUE TO CHOLEDOCHOLITHIASIS (71 CASES)*

Relevant symptoms, signs and history	*Incidence per cent*
Previous indigestion	94
Previous operations on biliary passages	33
Previous attacks with jaundice	44
Typical colic	70
Atypical colic	22
Minimal pain	8
Serum bilirubin less than 10 mg. in each 100 c.c.	66
Serum bilirubin 10 to 20 mg. in each 100 c.c.	27
Serum bilirubin more than 20 mg. in each 100 c.c.	7
Biliary passages patent	86
Biliary passages occluded	14
Chills and fever	52
Pruritus	60
Prolonged coagulation time	11

*Ratio of males to females 2:3.

STRICTURE OF THE COMMON BILE DUCT

Stricture was the cause of the jaundice in twenty of the cases in our series. A brief statement of the current hypothesis concerning the etiology of stricture seems desirable. Its primary cause is not definitely known. Whatever the cause, there appears to be little doubt that in predisposed subjects, cholecystectomy is the most significant factor in the development of this condition. In the records of The Mayo Clinic, there

has been only one case in which stricture of the common bile duct occurred without previous operation on the biliary tract and in that case stricture was due to congenital torsion of the gallbladder and ducts. There appear to be two types of stricture: those which are essentially

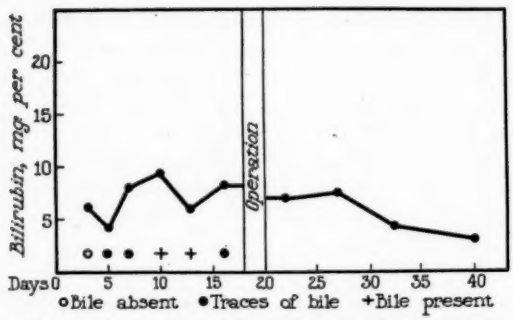

Fig. 2. Curve of serum bilirubin. Results of duodenal drainage in a case of stricture of the common bile duct are shown.

due to surgical trauma, and in which the symptoms develop immediately after operation, and those in which it is probable that direct trauma has not occurred, the stricture developing months after the primary operation. Judd has stated that in a fairly large percentage of cases the condition results from obliterative cholangitis, which is at least partially independent of surgical trauma. He has reported two cases in which jaundice developed four and thirteen years, respectively, after operations on the biliary tract. It is difficult to explain such cases on the basis of operative trauma alone. It seems probable that in many cases of disease of the biliary tract, widespread inflammatory conditions exist in the gallbladder, liver, and biliary passages. In certain cases this inflammatory condition persists after cholecystectomy and produces obliterative fibrosis of the ducts. On this basis one can explain some of the phenomena noted clinically in this group of cases.

The average age of the patients with stricture of the common bile duct in our series was about forty-two years. Eighteen of the twenty patients were females, a point which emphasizes the relatively greater frequency of benign lesions of the biliary tract in women. The total duration of symptoms in this group ranged from six months to thirty years; the average duration was approximately ten years. Since previous surgical operation on the biliary tract was a factor in every case, it is advisable to consider separately the symptoms which occurred before operation. In seven of the twenty cases there was definite biliary colic, and in three there were other and milder symptoms of cholecystitis. For those symptoms cholecystectomy had been performed in nineteen cases and cholecystostomy in one case. None of the patients had been relieved permanently, although one or two of them had had relatively long periods of comfort after the primary operation.

The postoperative symptoms vary somewhat, apparently depending on the degree of cholangitis present and on the presence or absence of surgical trauma. In about a third of the cases jaundice developed immediately after operation, in eleven it developed in from two to eighteen months, and in one case jaundice appeared for the first time two years after the original operation. In another case jaundice developed after an external biliary fistula had been closed. Prolonged postoperative biliary drainage is common in such cases, although it varies greatly in time of appearance, duration, and amount. In general, it bears an inverse relationship to the degree of jaundice present.

After the primary operation, colic was usually somewhat less severe than before. The attacks of pain were often accompanied by chills, pruritus, fever and other signs of biliary obstruction and infection. Indigestion and signs of nutritional disturbance usually increased progressively after the primary operation. In practically all cases there was more or less constant aching or soreness in the upper part of the abdomen.

Obstruction of the biliary tract was complete in six of this group of cases, and of these the obstruction could almost invariably be attributed to direct surgical trauma. In the remaining cases the biliary passages remained partially patent, and small amounts of bile could be obtained by duodenal drainage.

The degree of jaundice, as shown by examination of the serum bilirubin, usually was not great. In eighteen of the cases, the concentration of serum bilirubin was less than 15 mg. in each 100 c.c. Early in the course of the disease the serum bilirubin may fluctuate considerably. A typical curve is shown in Figure 2. The longer the illness the more constant the jaundice seems to be, a fact which may be referred to the biliary cirrhosis and cholangitis, which are almost invariable accompaniments of stricture. In fact

in cases of multiple operations for the relief of stricture of the common bile duct, the end-result is almost identical with the clinical picture of advanced primary biliary cirrhosis. In many cases of stricture there is a large element of intrahepatic jaundice, and the longer the case has progressed, the more likely one is to encounter hepatic insufficiency due to long-standing infection and obstruction of the biliary passages. This explains, at least to some degree, the difficulties of treatment in such cases. In fact, the clinical course of benign stricture of the common bile duct owes a good many of its characteristic features not so much to biliary obstruction as to injury to the parenchyma of the liver. Such injury probably accounts for the marked predisposition of these patients to serious hemorrhage. In our series of twenty cases a coagulation time of more than ten minutes was noted in about half of the cases, and in some of these the coagulation time was prolonged to half an hour or longer. Anemia is common (85 per cent of this group), often resulting from hemorrhage. Hepatic insufficiency, secondary to the marked biliary cirrhosis, was not uncommonly observed, particularly as a terminal feature.

It is fairly easy to make a clinical diagnosis of stricture of the common bile duct. Recurrent stones in the common bile duct may present a somewhat similar picture; occasionally stones may form above a stricture and thus may complicate the clinical picture. The difficulty arises not in the diagnosis but in the treatment of these cases. Nineteen of our twenty patients were operated on at the clinic; one patient died of hemorrhage before operation could be performed. Before the patients came to the clinic, eight of them had had one operation for repair of stricture, three had had two such operations, and two had had a fourth attempt made to repair the biliary passages. The difficulty which is encountered in preparing such patients for operation, the great technical difficulty of the operation itself, and the liability to postoperative complications, such as hemorrhage, and hepatic and renal insufficiency, all combine to make stricture of the common bile duct an extremely serious condition. In spite of this, good temporary results were obtained in half of the cases in this group, and in six of the others, cure may be regarded as permanent.

JAUNDICE DUE TO MALIGNANT OBSTRUCTION

The four varieties of carcinomatous obstruction of the common bile duct are: (1) primary tumors involving the head of the pancreas; (2) primary tumors of the gallbladder; (3) primary tumors of the common, hepatic, or cystic ducts, and (4) metastatic lesions involving any of these structures or the lymph nodes adjacent to the ducts. The diagnosis in all of these cases is likely to be difficult, and in many cases one can only hazard a shrewd guess that the obstructing process is of a malignant nature. Metastatic lesions are not common and frequently can be diagnosed on the basis of a primary malignant growth elsewhere in the body. Primary tumors constitute the really difficult diagnostic problem.

Our series includes thirty-nine cases of obstruction due to carcinoma. In twenty-six of these the lesion was carcinoma in the head of the pancreas, in eight the carcinoma was in the ducts, and in five in the gallbladder. In the group of patients with pancreatic carcinoma there were twenty-one males and five females; the average age was about fifty-five years. The total duration of symptoms in the cases of pancreatic carcinoma averaged about twenty-two months, and half of the patients had had symptoms for less than a year. Two patients had rather long histories, but their earlier symptoms may well have been due to lesions other than carcinoma. Practically all of the patients had had vague complaints of disturbance in the upper part of the abdomen, which antedated by some time the appearance of the jaundice. These disturbances took the form of abdominal soreness, flatulence, anorexia, dull boring epigastric pain and even atypical colic. The latter feature was noted in about 25 per cent of the cases. Three of the patients had had previous operations on the biliary tract, two for cholelithiasis and a third for indeterminate obstruction to the common bile duct, for which cholecystoduodenostomy had been done.

The relation of pain to the development of jaundice in carcinoma of the pancreas is significant. It is often taught that tumors in this situation produce a painless type of jaundice. In our series some degree of pain has been present in all but three cases. Other authors report a similar incidence of pain. Judd and Parker, in a series of thirty-four cases, found that 38 per

cent of the patients did not have pain, 35 per cent had colic, and 24 per cent had dull, boring pain in the upper part of the abdomen. In Mussey's series, 88 per cent of the patients had either dull pain or colic. The pain rarely coincides with the onset of the jaundice as it does in cases of stone in the common bile duct, and the colic which the patients describe is usually atypical. Dull, boring pain, often referred through to the back, is an equally common type of distress.

In six of the cases of pancreatic carcinoma, jaundice was the initial symptom; pain appeared later. The duration of jaundice was notably brief; the average duration in this series was about fourteen weeks at the time the patients presented themselves for examination. As a rule, jaundice is persistent once it appears. In only two cases in this group was the jaundice intermittent and in one of them the original jaundice may have been of intrahepatic origin. The average level of serum bilirubin was much higher than that seen in cases of stone in the common bile duct or in stricture. In the majority of the cases the values for serum bilirubin were between 15 and 30 mg. Stationary or gradually rising curves of serum bilirubin were the rule. In the few cases in which values for serum bilirubin were low, there was often a history of hemorrhage to explain the low figures. Complete obstruction to the biliary passages is the rule, as Crohn has shown, but there are numerous exceptions. In sixteen of the cases bile was not obtained either in the stools or in the material from duodenal siphonage. Bile was obtained on drainage in four cases, and in two of these it was heavily mixed with blood. In three additional cases there was also blood in the material obtained by duodenal drainage. The finding of blood in the duodenal content is rare in benign lesions and not uncommon (20 per cent of our cases) in the presence of carcinoma. Crohn called attention to the value of this diagnostic point.

A distended gallbladder has been considered the most significant of the physical features which have been supposed to be diagnostic of carcinoma of the pancreas. In all of this group of cases the abdomen was carefully palpated to determine the presence or absence of this phenomenon. A definitely distended gallbladder was found in eleven cases. It was questionably palpable in seven additional cases, and was not enlarged in the remaining eight. In another series reported from the clinic,[8, 15] the gallbladder was palpably enlarged in about 50 per cent. A much higher percentage is described in figures from necropsy. The liver was uniformly enlarged in twenty of the cases in this group.

TABLE II

JAUNDICE DUE TO CARCINOMA OF THE PANCREAS (26 CASES)*

Relevant symptoms, signs and history	*Incidence per cent*
Previous operations on biliary tract	12
Colic	27
Dull pain	61
Minimal pain	12
Pain followed by jaundice	7
Serum bilirubin less than 10 mg. in each 100 c.c.	16
Serum bilirubin 10 to 20 mg. in each 100 c.c.	44
Serum bilirubin more than 20 mg. in each 100 c.c.	40
Biliary passages completely occluded	85
Biliary passages patent	15
Blood in duodenal drainage	25
Palpable gallbladder	55
Chills and fever	36
Pruritis	75
Prolonged coagulation time	40

*Ratio of males to females 4:1.

Perhaps the most significant point about jaundice due to carcinoma at the head of the pancreas is its progressive and persistent nature. Complete obstruction of the bile passages (as shown by absence of bile in the material obtained by duodenal drainage and by high fixed levels of serum bilirubin) is of great importance clinically, and a presumptive diagnosis often can be based on its presence or its absence alone.

Among the incidental symptoms may be mentioned pruritus, which was present in nineteen cases of the series, diarrhea, which was noted in eight, and melena, which occurred in three. In one case, ascites was a late development. In three cases the pancreatic tumors had evidently impinged on the duodenum; they provoked symptoms of ulcer in one case, and of partial duodenal obstruction in one case; a positive roentgenogram for duodenal ulcer was obtained in one case. Laboratory data did not give diagnostic information, although anemia was more common in these cases than in cases of jaundice due to benign obstruction; the concentration of hemoglobin was less than 60 per cent in about two-

thirds of the cases. An elevated level of blood sugar was found in two cases; other signs of pancreatic insufficiency were uncommon. In about 40 per cent of the cases, coagulation time was prolonged, usually ranging from ten to fifteen minutes. The relative frequency of the important diagnostic data in carcinoma of the pancreas is given in Table 2.

In biliary obstruction due to carcinoma of the gallbladder or ducts, the diagnostic signs are much less definite; in fact, we have no reliable diagnostic criteria concerning this group of cases. Rolleston had divided the symptoms of carcinoma of the gallbladder into three groups: (1) symptoms connected with preëxisting cholelithiasis; (2) the local effects of malignant disease of the gallbladder, and (3) complications due to invasion of adjacent parts by the tumor, and to metastasis in the liver, peritoneum and elsewhere. The small number of carcinomas of the gallbladder in our series (five cases) does not permit of conclusions. The usual predominance in females was noted, and also the long prodromal symptoms suggestive of cholecystic disease. It is well known that carcinoma of the gallbladder is rarely found in the absence of cholelithiasis; in all of our cases there had been symptoms suggesting cholecystic disease for a long time before the onset of jaundice. The development of jaundice in cases of carcinoma of the gallbladder indicates that the disease has reached a terminal stage. All of our patients were definitely cachectic, persistently jaundiced, and suffering from more or less severe pain in the right upper quadrant of the abdomen. Jaundice was usually of short duration and intense. Epigastric soreness, flatulence, nausea, and vomiting were constant. A tendency to hemorrhage was noted in all five cases. In two cases the gallbladder was palpable, and in one of the other cases there was a questionable mass in its vicinity.

Numerous reviews of large series of cases of carcinoma of the gallbladder appear in the literature, and the consensus of opinion is that there are no positive diagnostic signs, although pain, a palpable tumor, and complete and progressive jaundice in a cachectic patient are suggestive. Enlarged supraclavicular lymph nodes should be carefully sought. In one case biopsy of such a node established the diagnosis of malignancy and saved the patient a needless operation.

Our series of cases of jaundice due to carcinomatous obstruction of the bile ducts included eight of carcinoma of the common or hepatic ducts. Again, this series is too small to permit of conclusions. Marshall recently reviewed a series of forty-nine cases, which have been recorded at the clinic in the last twenty years.

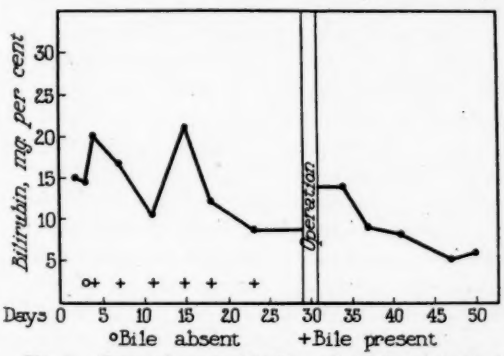

Fig. 3. Curve of serum bilirubin and results of duodenal drainage in a case of papillary tumor of the right hepatic duct.

From his data and from the series of cases reported by Outerbridge, Rolleston and McNee, certain points stand out. One is the predominance of the disease in male subjects (4:1). The age incidence is about similar to that noted in cases of carcinoma of the pancreas. Pain appeared to be less severe than in the groups of cases previously mentioned. In fifteen of Marshall's cases, the course of the disease was entirely painless, and in eight others the onset of jaundice was not accompanied by pain. About 40 per cent of the patients had atypical colic. As one might expect, obstruction to the biliary passages was usually complete. However, in two recent cases, there was a moderately free flow of bile on duodenal drainage; the tumors were situated in one or the other hepatic duct. The gallbladder was felt in nineteen of Marshall's cases, a fairly high incidence when one considers that seven of these patients had tumors of the hepatic ducts, which could not interfere in any way with the emptying of the gallbladder. In two of our eight cases, there was marked elevation of lipoid substances in the blood. In one of these two cases, obstruction was complete, whereas in the other case free flow of bile was obtained on duodenal siphonage. The curve of serum bilirubin and results of duodenal drainage in this last case are given in Figure 3. The fluctuating character of this patient's jaundice led to the suspicion that a stone was present in the common bile duct, and

exploration was advised. At operation a papillary tumor of the right hepatic duct was found. To summarize, it may be said that there are no reliable diagnostic signs in cases of tumor of the biliary passages, and one must be satisfied with establishing a diagnosis of malignant obstruction, without attempting to localize the lesion.

Although it is not possible to differentiate accurately the site of carcinomatous obstruction to the biliary passages, one is usually able to make a fairly accurate diagnosis of the condition in general. The atypical character of the pain, its lack of relation to the onset of jaundice, the persistence of jaundice once it has been established, the evidence of complete biliary obstruction, the cachectic appearance of the patient, and the progressively downward course, all are of great help in establishing a diagnosis. Gross blood in material obtained by duodenal drainage is almost pathognomonic. In our experience the effect of the jaundice on the patient also seems significant. In cases of stone in the common bile duct the attacks of jaundice are often well tolerated by the patient, in spite of the fact that most of these attacks are associated with definite signs of cholangitis. Obstruction due to carcinoma is essentially an aseptic condition, but it certainly has a far more serious effect on the general condition of the patient. This fact may be attributed perhaps to the high degree of hydrohepatosis, the resultant atrophy of the parenchyma of the liver, and to the injury which the carcinoma itself is producing.

TREATMENT

Without encroaching on the field of surgical colleagues, a word may be said about the surgical indications in obstructive jaundice. They are, briefly: (1) complete obstruction with distention of the biliary passages, with or without pain; (2) intermittent painful obstruction, and (3) doubtful conditions in which benign lesions are probable. These indications are necessarily rather broad. It has been said that the death rate from suicide of patients with complete biliary obstruction due to carcinoma is higher than the operative mortality for cholecystogastrostomy, a fact which one can readily understand when one observes the suffering from pruritus and pain which these patients undergo. Most cases of intermittent and painful obstructive jaundice are of benign origin, and there can be little doubt about the advisability of submitting such patients to operation. The third group encroaches on debatable ground. In any large group of cases of jaundice, there are many which can be diagnosed accurately only with the help of surgical exploration. When the question of surgical intervention is raised, it is the province of the clinician to appraise the severity of the risk and to do everything possible to reduce it by appropriate treatment. He should also assure himself that intrahepatic jaundice either is not present, or that it plays a minor part in the production of symptoms.

The four principal barriers to successful surgical care are renal and hepatic insufficiency, hemorrhage, and anemia. The first two are best avoided by the free use of solutions of glucose given intravenously. In our experience it is sometimes better to give solutions intravenously, before operation, than to wait for the actual development of trouble after operation. The value of glucose in obstructive jaundice recently has been reviewed by Ravdin. It may be said, however, that it is perhaps the most valuable single measure which we have at our command in caring for jaundiced patients. Since glucose has been more generally used it seems that deaths from renal and hepatic insufficiency are becoming less common.

The control of hemorrhage is still a problem. The use of calcium, as advocated by Walters, has been of great value, but it is not effective in every case. It should be emphasized that there is no demonstrable deficiency of calcium in obstructive jaundice.[4, 18] Nevertheless, calcium salts seem to exert a protective influence in hepatic lesions.[13] Transfusion is required in cases in which the hemorrhagic tendency is more severe and frequent repetition of this measure is often necessary. It has been noted[8] that there is an advantage in using a fasting donor and thus avoiding the reactions which jaundiced persons may show on receiving blood which is loaded with the products of digestion. Of the various anticoagulants which have been used, none has been of great value in our hands. Autohemotherapy, carried out by intramuscular injection, as suggested by Bollman, is more simple and practical, and deserves further trial. Irradiation of the spleen has had a large vogue in Europe, and seems to produce a good, although somewhat temporary, effect. Recently it has been

shown by Wright, Cowan and Hirschfelder that the use of concentrated solutions of glucose will elevate the concentration of blood calcium and will reduce the coagulation time in dogs with jaundice; Ravdin mentioned a somewhat similar phenomenon in human beings. In most cases of jaundice the measures just referred to will suffice to control hemorrhage. A small group of cases remains in which there seems to be an uncontrollable tendency to bleeding. Such a case recently has been noted at the clinic.[19] In this case there was reduction in the blood platelets as well as other signs of thrombocytopenia.

There are many minor points in regard to the care of patients with jaundice which are beyond the scope of this paper. One of these has to do with the selection of a time for operation. It has been noticed that the acutely jaundiced experimental animal is far more vulnerable than one in which jaundice has extended over a considerable period. The same may be said of the patient with jaundice, and care should be taken to avoid operation on patients in whom jaundice has been acute in its development or of short duration. Undue delay, on the other hand, may result in extensive hepatic injury. Each case appears to present an individual problem which must be acted on accordingly.

SUMMARY

An attempt has been made to show both the typical and atypical clinical characteristics of the various types of obstructive jaundice. In reviewing a series of this sort, perhaps the most striking feature is the fact that the atypical features are so common. This fact precludes a positive diagnosis in many cases of jaundice, and necessitates arbitrary division into surgical and nonsurgical cases. In all cases, however, the chances for diagnostic error are greatly minimized by a period of observation in hospital, a painstakingly accurate history in respect to pain, and the establishment of a curve of serum bilirubin to determine the intensity and the fluctuations in the jaundice. Such a period of observation permits one to determine the patency of the biliary passages by examination of the stools and by duodenal siphonage. It also establishes a better idea of the operative risk, and tends to reduce it as far as possible by permitting adequate preoperative preparation.

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A SYNOPSIS OF THE TREATMENT OF CHRONIC ARTHRITIS*

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THE treatment of chronic arthritis is one of the most complex of the problems in modern medicine. "Next to cancer, there is no more pressing medico-social problem than that of arthritis."[1]

The literature on the subject is burdened with glowing accounts of new drugs and the results produced by them. It is only after the physician has tried many of these new discoveries that he realizes how much better it is for him to adhere more closely to a saner routine, as more permanent improvement and actual progress is made by following such a course.

It is not intended that this paper will cover at all thoroughly the treatment of arthritis. The more strictly orthopedic aspect will be gone into in some detail and the other phases of treatment merely mentioned.

No time will be spent on the classification of the disease except to state that two forms are recognized. Proliferative arthritis, which is accompanied by such terrible deformities in younger people, and degenerative arthritis, which causes so much discomfort in older individuals, are to be considered.

In both types of arthritis, the treatment must be initiated by a thorough examination of the patient. Focal infection in teeth, tonsils, sinuses, prostate, and bowel are carefully searched for and, if found, are eliminated as thoroughly as possible.

Postural defects or other indications of faulty body mechanics should be remedied by the use of supports and supervised exercise.

The abnormally low basal metabolic rate present in 39 per cent of cases, according to Swain and Spear,[2] is treated with Lugol's solution or thyroid substance, and the lessened sugar tolerance found by Pemberton and others,[3] is favored by the administration of a low carbohydrate diet.[4]

The various drugs in use are too numerous to mention. It is found that sodium salicylate gives the maximum relief of pain and is not at all harmful. As there is no specific against the disease, the use of any harmless substance giving comfort to the patient is often all one has at his disposal.

Heat is a boon to all arthritics[5] and the method of administration not of the greatest importance. Best results have been obtained by the use of cabinets, or electric cradle baths, which, by their diaphoretic action, assist the general elimination. Local heat to the affected joints by the use of the electric baker, infra-red lamp, or diathermy helps to relieve the pain and diminish the swelling. A baker is very simple to construct and its usefulness unquestioned. As much heat as the sufferer requires is at all times available.

One other very important measure which must be emphasized is the use of foreign protein reaction produced by the intravenous administration of triple typhoid vaccine as suggested by Miller and Lusk, Albumose (Merck's) suggested by Kolmer,[6] Coley's Fluid,[7] and others. Very beneficial results have been obtained in cases which show signs of activity in the joints. The pain is quickly relieved, swelling in the joints subsides, and general improvement results in a definite percentage of cases. The method of administration is very simple. Beginning with 0.5 min. of triple typhoid vaccine (Minn. State Board of Health) intravenously, the doses are gradually increased 0.5 min. at a time, until 2 min. are given. Doses are given five days apart and in courses of five or six. The patient should be kept under observation, as the reactions are sometimes very severe.

Turning now to the more strictly surgical aspects of the disease, the thought of deformities immediately presents itself. Can these deformities be prevented and what can be done with them when they do occur? "We cannot prevent all deformities but we can prevent most of them," is a statement made by Pemberton.

The question of the prevention of deformities is one of prime importance, particularly to men in general practice. One of the great pleas made by all orthopedic surgeons is made to the general practitioner, begging him to apply splints of some

*Read before the annual meeting of the Minnesota State Medical Association, Duluth, Minn., July 16, 1930.

kind to every patient who is confined to bed because of any illness affecting his locomotor system. Much of our work in the treatment of arthritis, infantile paralysis and tuberculosis is the correction of deformities which could have been, to a great extent, prevented.

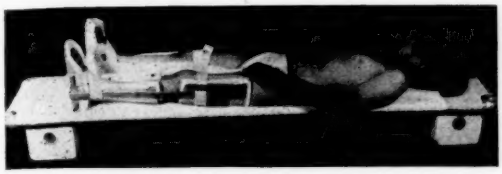

Fig. 1. Child is pictured fitted with splints holding the lower extremities in the position of optimum function. A sheet metal and strap iron splint fitted with felt pads and straps is shown on the left leg while a moulded plaster-of-Paris splint is shown on the right. A Bradford frame is used to keep the back straight and the hips from becoming flexed.

Fig. 2. A modification of the Jones abduction frame is shown. The method of keeping the feet in the right angle position, the knees in a few degrees of flexion, the hips slightly abducted and the back straight with the normal lumbar curve preserved, is clearly pictured. This splint is made of malleable iron so that any adjustments can be made as mild degrees of deformity are overcome.

In the acute onset or in acute exacerbations of the chronic disease, pain is present in the joints on the slightest motion. The muscles, by going into spasm, attempt to relieve the pain by holding the joints immobilized. The powerful flexor muscles hold extremities in flexed positions and if these positions are allowed to persist, deforming contractures result. It is essential in joint disease to be aware of the possibility of ankylosis and, if this condition is to develop, to hold the joints in the position of optimum function.

May we consider first of all the splints available. Plaster of Paris, because of its great adaptability, probably ranks highest, with sheet metal splints, aluminum splints, and padded wooden boxes next in order. For the spine, a bed with two mattresses and boards between them and the springs to prevent sagging, is always available to everyone. Bradford frames and plaster beds are probably the most ideal. A leather and steel back brace of the Taylor type can be furnished for ambulatory treatment (Figs. 1 and 2).

A knowledge of the optimum position for function is very essential. For the shoulder the position is one of 75° abduction and 15° of forward flexion with the palm of the hand directed toward the face. If one elbow is involved it should be held at a right angle in the case of a man, and below this point if the patient is a woman. If both elbows are involved one should be held below and the other above a right angle. The wrist should be held in the more powerful grasping position, slightly hyper-extended. The hip is best if it is held abducted, externally rotated, and flexed a few degrees while the knee is best if held flexed 5 to 10°.

At this point a word of warning must be injected. The too prolonged fixation of joints is very harmful, as ankylosis will surely follow, whereas it might not have developed if motion had been started earlier. With the subsidence of pain and tenderness, the joints should be baked and moved gently both actively and passively. The efforts of the patient to move the extremities benefits both the joints and atrophied muscles. Pump-handling stiffened joints does much harm by producing denser adhesions in response to the vicious irritation.

Synovectomy and removal of loose bodies.—Thickening of the synovial membrane with formation of villous processes which project into the joint spaces is frequently found in chronic arthritis. Frequent pinching of these villous processes in movements of the joints results in repeated attacks of joint pain, synovial swelling and effusion. Synovial tags, osteophytes, or fragments of joint cartilage may become detached. These loose bodies are a constant source of annoyance by causing repeated catches or locking of the joint. Synovial swelling and effusion usually follow when these bodies become pinched. Swett[8, 9, 10, 11, 12] states that removal of the synovial membrane from a diseased joint has a threefold purpose: (1) it removes joint exudate which would not absorb by the usual channels; (2) it removes infected tissue which may be considered as a secondary focus of infection prolonging the disease; (3) it allows improvement in the general metabolism because of the early resumption of active exercise.

Excision of these fringes, as much of the synovial membrane and as many osteophytes as can be reached, or removal of loose bodies, is accompanied by marked relief. A careful and thor-

ough synovectomy is followed by a short period of rest until healing has taken place before vigorous physiotherapy is instituted. The physiotherapy referred to is chiefly active motion of the joint by the patient's own efforts but not to the extent of producing irritative symptoms. Early

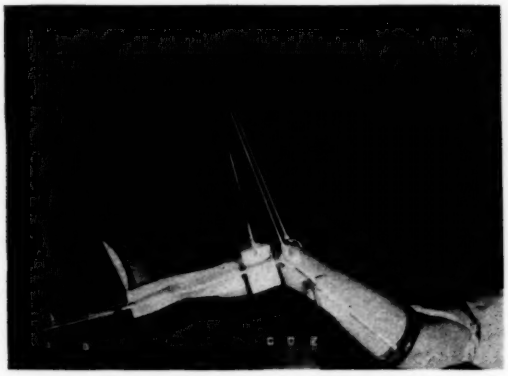

Fig. 3. The McMurray splint. An adjustable splint for the correction of flexion deformities of the knee is shown. Foot piece *B* attached to adhesive strips glued to the leg holds the foot at a right angle and rests on the side bars of the splint so as to prevent rotation of the leg. Traction downwards tending to straighten the knee is obtained by tightening the rope between the foot piece *B* and the lower end of the splint *A*. Traction upwards upon the upper end of the leg is made by tightening the rope passing from the felt pad *C* up over the top of the vertical pad of the splint. This pull prevents subluxation of the head of the tibia on the condyles of the femur as the joint is straightened. The direction of the traction on the extremity is changed as the knee straightens by adjusting the hinges *D* with the metal key *E*. Some of the muslin slings have been left off for the sake of clarity.

resumption of exercise after synovectomy results in general improvements in body metabolism, muscle tone, and physical comfort.

A patient who is willing to coöperate in the treatment of his disease need have no fear of a stiff joint following either of the above mentioned operations. J. Albert Key[13] has shown that there is replacement of the synovial membrane by a tissue of fibroblastic origin which takes on the function of the synovium.

If motion is present in a joint to such an extent as to be of definite functional value every effort must be made to preserve it. Frequently, due to the presence of a moderate flexion contracture, the motion present cannot be utilized. An example may be cited in the case of contracture of the knee joint. Frequently the joint is flexed so that weight bearing is impossible but there may be good available motion inside the angle of flexure. If the limb can be put in a position of good function and at the same time preserve the motion present, an excellent result will be obtained.

Frequently a joint stiffened by intra- or extra-articular fibrous adhesions retains a few degrees of motion. In this case the correction can be obtained through the joint itself. The method of widest acceptance is that of gradually stretching the contractures by the use of adjustable splints (Fig. 3) or plaster of Paris wedging dressings (Fig. 4). Either of these measures may be preceded by tenotomy of the contracted tendons causing the deformity. A carefully fitted, well padded plaster of Paris dressing may be applied to the extremity in the deformed position. A transverse cut is made through the full thickness of the plaster opposite the affected joint line on the side of the concavity. By insinuating wooden blocks of increasing thickness the flexion of the joint is gradually overcome as the gap in the plaster increases. Undoubtedly this is a method which is available to every practitioner. Splints of the adjustable type are very efficient but require careful observation and repeated adjustments as the deformities are overcome.

Silver[14] has shown very conclusively that the joint capsules play a large part in the maintenance of deformities. The denseness of the scar formation in these tissues practically prohibits its correction of contractures, and if forcible means are used the result is often a subluxation of the joint. By dividing the capsule on the side of flexion, contractures can be corrected completely, or nearly so, at once. The limbs are held for a short time in plaster of Paris and then immobilization is followed by use of physiotherapy directed towards active and passive motion. A warning must be issued against the complete correction of contractures if, by so doing, the vessels and nerves in the area would be put under too much tenson. The reason for the warning and the results which would follow are obvious.

Forcible manipulation of joints to correct contractures must be mentioned, but this method is not a safe one except in the hands of an expert.

A few degrees of motion in a diseased joint is very seldom of any functional benefit and only too often it is a cause of disability because of the accompanying pain. The problem of treatment in these cases is difficult. One must decide whether a firmly ankylosed joint in good functional position is more advantageous to the patient than a joint upon which an operation for the production of more motion has been attempt-

ed. It must be remembered that many of the arthroplastic and similar operations are followed by a recurrence of ankylosis. From the economic standpoint, the early ankylosis of the joint may be to the patient's benefit.

The operations designed to produce complete ankylosis in the joints are all fairly satisfactory. Probably the best procedure is the intra-articular fusion or arthrodesis. Extra-articular fusion may be obtained by a similar type of operation and as the joint is not opened the shock is not so severe. Fixation in plaster of Paris is maintained after operation until ankylosis has been obtained.

As regards the correction of deformities in joints which are completely ankylosed, much can be said. The methods to be used depend upon whether a movable joint, or a fixed joint in good functioning position, is to be the object attained. Osteotomies of the linear or cuneiform types allow the bones entering into the ankylosed joints to be placed in the desired position. Plaster of Paris dressings are applied to maintain the extremity in this position until union takes place. In many cases this is the most desirable procedure as it gives freedom from pain, an extremity in good position for function and an earlier return to work than is obtained in the other type of operation. The joints, however, remain firmly ankylosed.

Many operations have been described for the production of motion in ankylosed joints. A discussion of the various methods with evaluation of end-results is too big a subject to be considered at this time. There are a few general considerations which could be mentioned. If both hips are ankylosed an arthroplasty of at least one of the hips should be attempted. If this is successful the opposite hip may be operated upon at a later date. If the hip and knee of one extremity are ankylosed, an attempt to obtain functional motion in the hip should be made. The ankylosed knee would probably not be enough of a disability to make arthroplasty on this joint necessary if motion is obtained in the hip.

This brief summary would not be complete without at least mentioning some of the most recent work upon the problem. Reference is here made to the sympathetic ganglionectomy[15] introduced by Rowntree and Adson[16] in 1927. The work is highly experimental and remote results have not been observed. Changes in the extremities are chiefly due to the increased blood supply following the abolition of the vasomotor influence on the blood-vessels. Skin surfaces change from the cold, clammy, waxy appearance found in chronic proliferative arthritis to the warm, dry, ruddy complexion of normal skin. Joint

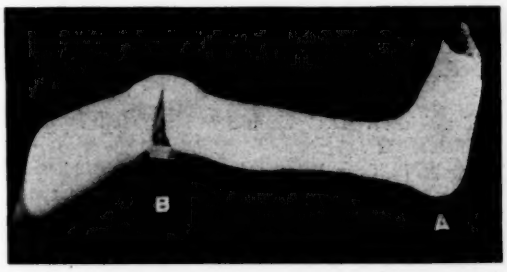

Fig. 4. This illustration shows the use of a plaster-of-Paris wedging dressing. A well padded plaster dressing is applied from the tips of the toes to high up on the thigh, holding the foot at a right angle and the knee in as much correction as can easily be obtained. By splitting the plaster through ⅞ of its circumference at the flexure of the knee wooden blocks of increasing width can be inserted between the edges of the cut in order to overcome the flexion deformity.

pain and joint effusion subside, probably due to the improved circulation. One of the questions which must be decided, however, before much enthusiasm is developed, is the ultimate outcome of the joints themselves. Can we expect to interfere radically with the sympathetic supply to blood-vessels, joints, and other soft parts without producing unfortunate end-results? What are the possibilities of the development of neuropathic joint disease like that found in tabes dorsalis, syringomyelia, and other similar conditions? Is the relief from pain, the comfortable warmth, and decreased swelling a permanent change or is it just a temporary one? It is felt that in carefully selected cases the procedure is worth trying and that efficient after-care and observation will bring many hopeful facts to light.

The treatment of arthritis may be summarized briefly:

1. The persistent search for foci of infection and metabolic and static disorders, and their correction.

2. Improvement of general health by supervised rest, diet, heliotherapy, etc.

3. Alleviation of pain in recently infected joints with local heat, and properly controlled fixation in splints and in the chronically inflamed joints by mechanical or operative fixation.

4. Relief of pain and swelling with increase

of motion in the joints by the use of triple typhoid vaccine to produce foreign protein reaction.

5. Restoration of motion when possible, by active and passive exercise or by operative means.

6. The correction of deformities.

7. Sympathetic ganglionectomy in properly selected cases.

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UNDULANT FEVER*

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UNDULANT or Malta fever is an infectious disease. The infecting organism, known as *Brucella Melitensis,* may be isolated from the spleen, blood or urine. The exact mode of transmission is not known but has occurred from bovine, caprine, porcine and equine sources.

Although some cases may run an acute course and show a high percentage of mortality, yet the typical case is markedly protracted and of chronic or subacute character. The tendency of the febrile accessions to recur after an apyrexial interval accounts for the name undulant fever.

The typical case runs a course of three to four months or longer and the mortality rarely exceeds 2 per cent. Joint pains and neuralgia manifestations are fairly characteristic.

The causative organism, the *Brucella Melitensis,* is sometimes called *Bacillus Abortus* or *Bacterium Melitensis.* The causative organism of undulant fever in man, Malta fever in goats and abortion in cattle cannot be distinguished morphologically or biochemically.

Originally the infection was supposed to come from goats' milk only, but today ideas have changed. Individuals in various occupations contract it. But it seems most common in those who work with live stock, handle meat, or drink raw milk and cream. The method of infection seems to be varied and not infrequently it is impossible to trace the source of infection in a given case.

To date, eighty-eight cases have been reported in this state. Last year forty-two, and so far this year twenty-two have been reported. The increasing distribution of undulant fever suggests that the physicians are confronted with the necessity of familiarizing themselves with the symptomatology of the disease as they may be called upon to diagnose the condition. The fact that it may be transmitted by raw milk gives it geographically boundless limitation.

The diagnosis is by no means an easy matter inasmuch as the complete group of symptoms is not met with at the onset but is established by a slow evolution. The syndrome is incomplete until 5 or 6 weeks elapse from the beginning of the disease. The prodromal symptoms of undulant fever are malaise, anorexia, constipation, vague pains in the limbs, often so slight that the patient hardly notices them. Gradually they become more pronounced and ultimately the headache and interim lassitude compel the patient to forego his occupation and remain in bed. When this stage is reached the temperature is usually around 103 to 104. Most observers state that up to this time there are no respiratory symptoms, so influenza, for which it is frequently mistaken, may be eliminated early.

During the first wave of undulation of the fever the disease may be mistaken for typhoid fever although the two do not run courses that are in any way similar. In undulant fever there is rarely, if ever, any delirium, and constipation is the prevailing state of the bowels. In typhoid fever diarrhea and delirium prevail more often. Then the temperature curve is quite different from that in typhoid. It presents a well defined matutinal remission and the nightly fall of the temperature is invariably followed by more or less profuse sweating. After two or three weeks the diagnosis becomes less difficult and the patient presents nothing suggestive of a typhoid condition. His mental state is perfect in spite of the persistent high temperature; his digestive tract is unimpaired and is, in fact, in a better state than earlier in the attack; he has a particularly good appetite; and finally the Widal is negative and there has been no rash.

After persisting two or three weeks, undulant fever usually recurs and the patient enters the second undulation of fever. Such relapses recur for months and the disease may last for years. Various authors have reported cases in which the diagnosis was made from repeated agglutination tests, which have lasted from eighteen months to two years. Other cases have

*Read at the Sixty-second annual meeting of the Wabasha County Medical Society, Wabasha, Minnesota, July 10, 1930.

been known to terminate in from twenty to thirty days.

The spleen is usually enlarged in undulant fever and becomes palpable below the costal margin. It may be tender to pressure. A slight swelling of the lymphatics of the inguinal and cervical region has been mentioned by some.

Pain and swelling of the joints is present in about one-half of the cases reported. For this reason the disease is often mistaken for arthritis. The joint pain usually resists the medication to which rheumatic pains usually respond, and no tendency to endo- or peri-cardiac involvement exists. It is often hard to distinguish these pains from gonorrheal rheumatism, which they resemble in many respects. Not infrequently the serous exudate into the joints may be extensive and aspirations which have been made have made it possible to demonstrate the specific organism in the fluid withdrawn.

Undulant fever should be suspected in any case with an unexplained fever.

Subacute pyogenic infections are much more difficult to eliminate and a diagnosis may not be possible on the face of the negative blood cultures until embolic signs appear. Acute miliary tuberculosis in the early stages may cause confusion but the detection of old foci, the use of the *x*-ray and the course of the disease will eventually clear up the diagnosis. In this climate, where only the tertian form of malaria occurs, there should be no confusion with this disease. Hidden foci of infection might cause confusion but the blood picture is entirely different in most patients, for in undulant fever we usually have an anemia with a leukopenia, although the blood may be normal.

In about three-fourths of the cases cranial and facial neuralgia, lumbago and sciatica are mentioned in addition to arthritic pains. Some consider that epistaxis is a frequent symptom. Others insist that it does not occur early in the disease but is occasionally seen later in its course and in severe cases hemorrhages from the gums, intestines and even from the stomach have been reported.

Respiratory symptoms are quite common but are by no means constant.

The tongue becomes coated with a yellowish white fur early in the disease. The breath is usually fetid and the patient complains of a disagreeable taste in the mouth. The bowels are constipated.

Few symptoms of the disease suggest anything that may be spoken of as pathognomic, but many insist that the drenching night sweats are more typical than any which have been observed.

A summary of the symptomatology collected from even the recent contributions to the subject seems to suggest that the disease has many features which are atypical and were it not for the fortunate fact that the agglutination test with the dilution of the two organisms capable of producing the disease is available, a diagnosis would be practically impossible.

The eradication of the disease from a naval hospital at Malta by the boiling of the milk points to this important measure in the control of the disease. But it must also be remembered that the disease can be contracted from hogs, cattle, cheese, etc., so we must make an attempt to destroy all animals with the disease. All milk should be boiled or pasteurized. If no other reason existed for the pasteurization of all milk, the increasing prevalence of undulant fever would be an adequate one.

There is no drug that seems to have any influence on the course of the disease. Neoarsphenamine has been reported to be of value. The constipation should be corrected. For the insomnia and pains, hydrotherapeutic measures are indicated. Because of the length of the disease it is necessary to give a diet of sufficient caloric value. Some advise the use of vaccines and others have had no assistance from them.

Because of a mortality of only 2 per cent, there has been practically no autopsy material, so our knowledge of the pathology is not very exact. It is a bacteremia which can be demonstrated by blood cultures. So far as is known it does not cause abortion in women. The incubation period is thought to be about two weeks. It would seem reasonable to suppose that in the intestinal tract might be found the nidus of the infection if the entrance of the bacteria in many of the cases, and hypothetically in all, is by way of the mouth. It has been found by several observers that ulceration occurs in the small intestine in a small proportion of those dying from the acute malignant form. X-ray has shown definite irritability of the large intestine in a chronic case. This case immediately improved

and lost all symptoms when treatment was directed to the intestines. The sickness seems to be caused by the bacteria itself and not by a toxin, for injecting dead bacteria into cattle will cause no disturbance, while the injection of the live bacteria causes abortion.

Blood for examination should be drawn from the vein into a clean, small, empty bottle and sent to the State Board of Health, University Campus, Minneapolis. I use a Wassermann container and label it, "For Undulant Fever Agglutination." The State also examines it for typhoid, para-typhoid and tularemia.

Conclusions:

1. The *Bacterium Melitensis* will produce abortion in cattle and undulant fever in man.
2. The exact mode of transmission is not known.
3. The number of cases is increasing and it is very important that we familiarize ourselves with the various signs and symptoms in order to recognize it.
4. There seems to be no pathognomonic signs.
5. Undulant fever should be suspected in any patient with an unexplained fever.
6. Our knowledge of the pathology is not very exact.
7. The agglutination test as performed by the State Board of Health is the deciding factor.
8. The greatest point in treatment is prophylaxis. All animals harboring the disease should be destroyed. The barns and buildings that housed them should be cleansed, disinfected, and well aired. All milk should be boiled or pasteurized.
9. There seems to be no specific medication, vaccines having proved of little value.

REPORT OF CASE

The patient is a very obese woman of thirty-nine years, who has been enjoying good health until June 30, 1929. The day before, June 29, she went on a picnic and had strawberries and cream. That evening she felt very tired. The next morning, July 1, she awoke with a severe headache and pain throughout her back. She tried to do her washing but had to give it up for she felt so miserable. That afternoon her temperature was 101. At this point she went to bed. She did not feel hungry; her bowels were constipated. She ran this temperature and felt very miserable all week. Each day she thought she would feel better the next day, for she did not feel especially sick but just feverish and miserable.

I saw her first, July 7. At that time she complained of headache, backache, general malaise, a slight unproductive cough, chills and fever, and profuse night sweats. Physical examination showed only temperature 101, pulse 100, flushed face, coated tongue; the urine was normal. The condition remained about the same for several days. The blood Widal was negative but was positive for undulant fever agglutination.

About ten days after the onset the patient had a severe nose-bleed. On July 22 she began to have severe pains in the left leg and it began to swell and was edematous. She ran a fever of 99.5 in the morning to 102 in the evening for eight weeks. Most symptoms cleared up after about five weeks except the swelling in the left leg, which still persists today to some extent.

This patient never drinks milk, and usually uses cream only in her coffee. She had cream on her strawberries the day before the onset of the disease. The herd furnishing the family with milk was tested and ten of the herd were infected with ***Bacillus Abortus.***

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CASE REPORT

ACTINOMYCOSIS OF THE MEDIASTINUM*

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Although infection from actinomycosis is not at all uncommon in man, involvement of the mediastinum is comparatively rare. The following case is therefore of interest, and illustrates some interesting points in clinical diagnosis.

A school boy, H. J., aged 14, entered Fairview Hospital February 3, 1929, complaining of severe cough, swelling of the abdomen, shortness of breath even when sitting up, weakness, fever and sharp pains in the lower left chest.

History of Present Illness.—The boy was always healthy, though never strong, until nine months previous, when he had an attack of pleurisy in the lower left chest, which kept him in bed one month. He had no cough at this time, little if any fever, only severe sharp pains in lower left chest on deep breathing. He seemed to regain his usual health, but about three months later (September, 1929) he noticed a beginning weakness. Soon he noticed dyspnea on exertion with accompanying precordial pain. About December 1, 1929, he suddenly developed a severe irritating cough which never left him, but continued to grow worse. Two weeks later he noted his abdomen seemed enlarged. At Christmas time he had to go to bed because of another attack of pleurisy in the lower left chest. The dyspnea, weakness, precordial pain, cough, and swelling of the abdomen continued to increase up to the time of his entrance to the hospital. He saw several local physicians who treated him for heart trouble without relief of symptoms.

Past History.—He had always lived on the farm, and had never had any serious illnesses, operations or accidents.

Family History.—The father is forty-five years of age, living and well, but has clubbed fingers. The mother died at the age of thirty-eight, probably from pulmonary embolism, as death was sudden following a painful swelling of one leg. Three brothers and two sisters are living and well.

Physical Examination.—General inspection showed a greatly emaciated lad with drawn expression, orthopneic, cyanotic and annoyed by a persistent, dry, hacking cough. The eyes seemed sunken in his head, his pupils were dilated, but reacted somewhat to light and accommodation, were equal and regular. Mucous membranes were pale and cyanotic. Dental caries was marked and the tonsils were large and appeared infected. The tongue was coated and dry. The neck showed marked enlargement of many of the cervical glands, one on the right side being very conspicuous. Axillary and inguinal glands were not enlarged.

Configuration of chest showed a tendency toward the pigeon-breast type with marked depression of the intercostal spaces, and lower part of sternum. Tactile fremitus was somewhat decreased at both lung bases posteriorly, especially on the right side. Percussion over the lungs posteriorly showed fairly good resonance except at the bases and over the spine down to the eighth thoracic. Resonance in front was fair, but a large wide area of mediastinal dullness existed. Broncho-vesicular type of breathing of a very coarse character was generally present over the lungs in front and behind, with several small areas of bronchial breathing in both lungs accompanied by coarse, moist râles. Breath sounds were diminished at both bases with no evidence of passive congestion.

The apex beat of the heart could be seen and palpated indefinitely in the fifth interspace, in the anterior-axillary line. Percussion revealed marked general enlargement of the heart, especially to the right. The heart tones were clear, but weak and distant with a rough systolic murmur heard over the base. The pulmonic second sound was louder than the aortic second tone.

The blood pressure was 85-50; pulse 140.

The abdomen was very prominent and a large mass could easily be seen which filled the entire upper half. This proved to be, on palpation, a very hard, firm, tender liver with rounded edge. The spleen was also enlarged extending down to the level of the umbilicus. The small intestines seemed to be all pushed into a bunch over the lower mid-abdomen. The genitals were normal. The kidneys were not palpable.

The extremities were thin and there was some edema about the ankles. The skin was dry and shiny and the veins over the chest and abdomen were dilated. Reflexes were normal.

During the twelve days' stay at the hospital he ran a constant fever, varying daily from normal to 104 degrees on one occasion. It was of a septic type. The pulse rate varied from 100 to 160, respirations from 24 to 50.

Laboratory Findings.—Urinalysis on February 4 and 7 showed the specific gravity to be 1.029, albumin one plus, sugar none, microscopic negative.

On February 8 the phenolsulphonephthalein excretion was 50 per cent the first hour; 25 per cent the second hour.

Blood examinations were as follows: Feb. 4, R.B.C. 3,750,000; Hgb., 57 per cent (Talquist); W.B.C., 14,400 with 90 per cent P.M.N. Feb. 5, blood smear, 90 per cent P.M.N. Feb. 8, W.B.C., 15,500. Feb. 13, blood culture negative. Feb. 14, R.B.C., secondary anemia

*Read before the Minnesota Society of Internal Medicine, at Duluth, Minn., May 26, 1930.

type; 82 per cent P.M.N. Feb. 16, Wassermann negative.

It was learned at this time that the boy had been in the University Hospital for a few days prior to entering Fairview Hospital. No final diagnosis was arrived at by the doctors there, however, as he left under protest before the examination had been finished. Their impression, however, was that he had a malignant tumor of the liver and a mediastinal tumor, probably lympho-sarcoma.

The first *x*-ray pictures were taken at the University Hospital on January 31, 1929. Dr. Rigler's report was as follows:

1. Mass in mediastinum, probably lympho-sarcoma.
2. Pleural effusion, right.
3. Intra-abdominal mass, probably associated with liver.
4. Bilateral maxillary sinusitis.

On February 5, 1929, *x*-ray pictures of the chest and sinuses were taken at Fairview Hospital, which showed a greatly enlarged heart, a mediastinal mass, and a small bilateral pleural effusion (Fig. 1). There was bilateral maxillary sinusitis. Fluoroscopic study of the chest by the author showed a marked general enlargement of the heart with some preponderance of the right ventricle, as noted in the left anterior oblique position. No enlargement of the auricles was noted. Electrocardiographic study showed a tachycardia (150), right ventricular preponderance, arborization block, grade I, and inverted T_3.

From these clinical and laboratory data, the following diagnoses were made:

1. Cervical and mediastinal adenopathy, probably a lympho-sarcoma or Hodgkin's disease.
2. Mediastinal pressure syndrome.
3. Adhesive pericarditis with constriction of the inferior vena cava, with resulting passive congestion of liver.
4. Passive congestive type of decompensating heart.
5. Bilateral pleural effusion.
6. Low grade type of broncho-pneumonia.
7. Bilateral maxillary sinusitis.

The diagnosis of mediastinal pressure syndrome was made on the presence of an early Horner's sign (stimulating pressure on sympathetics), marked dilatation of the veins in the neck with cyanosis, and the extremely irritating cough. The impression of constriction of the inferior vena cava was based on the clinical findings of extreme passive congestion of the liver with little or no passive congestion in the lungs, in the absence of tricuspid and pulmonary stenosis, which may give similar findings.

The bilateral pleural effusion was explained on the basis of pressure from the mediastinal tumor mass on the hemiazygos and azygos veins.

Removal of a recently enlarged cervical gland for microscopic study was advised, but this was refused.

The condition of the boy continued to grow worse each day. There was little or no response on the part of the heart to digitalis, caffein-sodium benzoate or coramine. The administration of salyrgan in one to two c.c. doses intravenously and euphylin by mouth resulted in moderate, temporary diuresis. Sedative cough mixtures had no effect. On February 11 the temperature reached 104 degrees and the type of breathing changed to that commonly seen in pneumonia. Many râles now were present all over the chest, with several definite areas of broncho-pneumonia. Death ensued two days later.

In view of the previous attitude of the relatives, we were delightfully surprised to obtain permission for a post-mortem examination. This was made by Dr. Paul H. Cuttman, and his report is as follows:

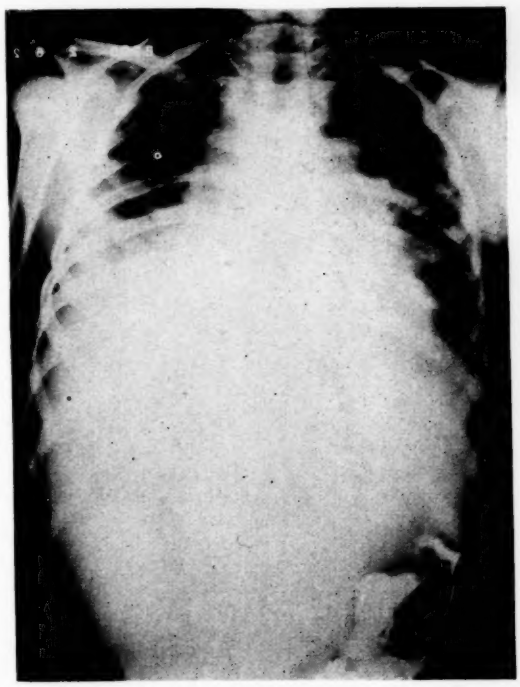

Fig. 1

"The body is that of a well developed, emaciated white boy, 150 cm. in length and weighing about 85 pounds. Rigor is moderate, there is purplish hypostasis posteriorly, slight edema about the ankles, no cyanosis or jaundice. The pupils are equal, regular and in mid-dilation. The abdomen is very prominent and tense. The veins over the abdomen, chest and neck stand out prominently. There is marked enlargement of lymph nodes in the anterior cervical region.

"The abdominal fat is scant. The abdomen contains about 450 c.c. of clear, straw-colored fluid. The liver reaches 12 cm. below the costal margin in the right mid-clavicular line. The appendix shows a marked kink in its proximal third; it is below the cecum and is not adherent to the surrounding tissues. The diaphragm is at the seventh interspace on each side.

"Each pleural cavity contains about 750 c.c. of brownish fluid containing occasional fibrin flakes. On removing the chest plate numerous pus pockets are en-

countered over the mediastinum. The entire mediastinum and the pleura over the anterior half of the right side and adjacent mediastinum on the left are markedly thickened and indurated. The mass is composed for the most part of a firm, grayish tissue, containing pus pockets varying in diameter from a few millimeters to 2 cm. The thymus is lost in this fibrous mass. The medial surfaces of the lungs, the pericardium and the

Fig. 2

great vessels leading to and from the heart are matted together in this mass. The pericardial surfaces are firmly adherent and cannot be separated. The pericardial space is obliterated.

"The heart is left *in situ* and not weighed. The myocardium is of a light brownish red color and shows no evidence of hypertrophy. The endocardium shows no change. The valves appear normal. The root of the aorta shows no evidence of arteriosclerosis and the coronary orifices are widely patent. The superior vena cava is not obstructed. The inferior vena cava near its opening into the right atrium is reduced to a small diameter by fibrous growth about it; it will scarcely admit the small finger.

"Each lung is markedly atelectatic; crepitation is almost absent throughout. The surfaces are dark purple color. On section the surfaces are meaty and red. The upper and middle lobes of the right lung show increase of fluid and grayish red mottling. A small amount of purulent material can be expressed from the small bronchi.

"The spleen weighs 140 grams. The capsule is fairly smooth. The surface is smooth and of a slate blue color. The substance is soft and brick red; it scrapes readily. The corpuscles are indistinct.

"The liver weighs 1,725 grams. The surface is smooth and of dark purplish color. The edges are slightly rounded. The organ sections with normal resistance and the substance is firm; it shows typical nutmeg appearance throughout. The gall bladder is of normal size and color and contains a stringy greenish bile. The bile passages show no lesions.

"The gastrointestinal tract, pancreas and adrenals show no lesion.

"The right kidney weighs 160 grams, the left 190 grams. The surfaces are smooth. The capsules strip readily. The color is pale grayish red. On section the edges evert slightly. The cortex is pale and cloudy; the medulla is slightly darker; shows no gross lesion. There is no change in the pelvis, ureters, bladder or prostate.

"The lymph nodes about the aorta are increased in size, firm, and grayish white; there is no breaking down of the tissue.

"The aorta is smooth throughout. The organs of the head and neck are not examined."

Microscopic Examination.—The first tissues examined from the lower part of the mediastinum and the pericardium showed marked inflammatory reaction, consisting of connective tissue and polyblastic infiltration; small abscesses containing abundant polymorphonuclears in the center surrounded by connective tissue. This was interpreted as a chronic suppurative inflammatory lesion but, because of the gross peculiarity of the lesion, further sections were made from places showing multiple small abscesses, and these are found to contain small abscesses surrounded by epithelioid cells and connective tissue and containing in the center typical actinomycetes (Fig. 2).

Diagnoses.—

1. Mediastinal actinomycosis.
2. Chronic suppurative pericarditis and pleuritis.
3. Stenosis of inferior vena cava by contraction of scar tissue.
4. Ascites; bilateral hydrothorax.
5. "Nutmeg" liver.
6. Cloudy swelling of kidneys and heart.
7. Septic spleen.

Comment.—Next to the face, the neck is the most frequent site of actinomycosis. The primary lesion is often cicatrized and only scar tissue remains as evidence of the original infection. The disease is not spread by blood or lymphatics, but by continuity. The tissue is destroyed and liquefied, and the picture is one of induration, areas of suppuration, sinuses and fistula formation. Although no definite sign of a previous initial lesion could be found about the face or mouth in this case, there were plenty of enlarged infected cervical glands, which deeply invaded the lower part of the neck. Actinomycosis of the mediastinum is always secondary, and from these deep-lying glands the infection extends along the loose connective tissue of the sheaths of the great vessels to the mediasta.

Most authors agree that involvement of the anterior mediastinum is rarer than that of the posterior. In my case the entire mediastinum was involved. Extension is usually first to the posterior mediastinum. Through the mediastinum, extension may occur to the pleuræ, lungs, heart and pericardium. Because of improper drainage from these deep parts, the disease is very serious when involving any of these structures. According to reports in the literature, diagnosis is rarely made antemortem. I believe a diagnosis would have been made in my case if a cervical gland could have been removed. However, the condition should have been thought of and considered in view of the boy having lived in the country on a farm, and exhibiting such extensive involvement of his cervical glands. He exhibited what has been called the neoplastic type which is characterized by an abundant proliferation of connective tissue which, without the presence of mycelium, is difficult to differentiate from round cell sarcoma. However, when the actinomycotic nodule broke down, small abscesses were found containing pus and the characteristic yellow granular bodies. These were fairly numerous substernally and in the posterior mediastinum.

Tuberculosis and syphilis are usually considered in the differential diagnosis of actinomycosis, but in my case, lympho-sarcoma and Hodgkin's disease were also included. The presence of a polymorphonuclear leukocytosis should have directed me to a suppurative process other than tuberculosis. The absence of a draining sinus made the diagnosis more difficult. Van Den Wildenberg refers to a complement deviation reaction as a means of diagnosis, because the serum of the person with actinomycotic parasitosis contains specific antibodies.

The diagnosis once established, treatment should consist first of a trial with large doses of potassium iodide internally and injected into the infected areas in strengths of 1 per cent. This has cured many of the superficial cases. The drug is not a specific in the true sense of the word, but acts rather on the neoplastic tissues causing them to undergo a rapid breaking down and thus more quickly to establish drainage to the surface. Other methods advised are deep roentgen-ray therapy, autogenous vaccines and Yotren.

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PRESIDENT'S LETTER

A CONSIDERABLE number of years ago there was a great deal of agitation over child labor conditions, particularly as they obtained in the south. This resulted in Maternal and Child Hygiene legislation by the national legislature. The object of such legislation was to control and abolish child labor. Though commendable in purpose the supreme court ruled that the law was unconstitutional inasmuch as it attempted to regulate matters that properly belonged under state rather than national control.

The next legislative action attempted to get control of the situation by taxation. When this law was carried to the U. S. Supreme Court the same ruling was handed down as in the case of the preceding law. The next step was the enactment of the Sheppard-Towner Maternity and Infancy Act, approved November 23, 1921. This law sought to evade the constitutional strictures placed upon the two preceding laws by offering to purchase, from individual states, the privilege to coöperate with them in providing for the health and well-being of mother and child. Incidentally provision was made for conditions to which each state desiring federal aid in the management of its own affairs would be obliged to subscribe in order to obtain the proffered financial aid. Thus was Federal domination of state activities insured to the national government. All of this legislation was endorsed by the U. S. Department of Labor and the administration of it was placed in the hands of the Children's Bureau of that department. The supreme court has never had occasion to rule upon the constitutionality of the Sheppard-Towner Act.

The chief objection to this act is that, in spirit, it violates certain constitutional guarantees which delegate to the several states, rights and obligations to regulate affairs that are clearly within the province of each state. The act is primarily a labor law masquerading as health legislation and diverted in its administration to the promotion of the health and safety of women in pregnancy and confinement as well as to the health and safety of the new-born. No one can complain of the purposes of this law, either in conception or operation. The law meets with opposition, as stated above, on constitutional grounds. Also because it seeks to transfer the practice of medicine from the individual to the hands of the state; from professional influence to lay domination; from the unbiased guidance of science to that of a centralized political bureau. Inasmuch as the Sheppard-Towner Act and similar laws seek to lower maternal and infant mortality it is only right that we should know the mortality rate and if it can be lowered. Without submitting figures it may be stated that the present rate is very much too high and that it is due to almost entirely preventable causes, namely eclampsia and infection. It has been stated by reliable authority that maternal deaths from these two causes alone can be reduced by at least two-thirds.

Question.—Is the medical profession going to effect this reduction? If it is not going to answer this question in the affirmative let it acknowledge its insufficiency and its indolence, accept Sheppard-Towner legislation with all its iniquities, and permit the state to demonstrate its superior ability. Our prospective mothers are entitled to every safeguard and protection in the crowning hours of their existence. If we will not do our full duty let us not complain if the public does it for us.

It is high time that we awaken to our responsibilities in relation to maternal welfare. These responsibilities are not collective only, they are also individual. Every doctor in every city, village, hamlet and cross-roads should strive, and strive earnestly, to prevent these death dealing afflictions to which maternity is exposed. No effort should be spared, no opportunity lost, by any doctor to teach his people the value of prenatal care. Every doctor knows the conditions leading to infection and he knows how to prevent or correct them; he knows the signals of approaching eclampsia and he knows how to avert the danger. Let each and every one, whether specialist or general practitioner, act on this knowledge and so reduce the maternal death date.

We are charged with the responsibility of safeguarding our women through maternity. We must prove ourselves worthy of our trust. Whereas the state seeks to make an organized effort to do this work, we fail to do so. We take an active and organized part in heart problems, lung problems and economic problems, and now why not in obstetric and maternity problems? The prevention of maternal sickness, misery and death is an inviting field, offering great possibilities and glorious reward. Every component society in the state should organize an educational movement of this kind. It would be well if the University Extension service, obstetric societies and the State Medical Association would coöperate in putting such an educational movement into effect.

S. H. Boyer

President,
Minnesota State Medical Association.

EDITORIAL

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INTER-STATE POSTGRADUATE MEDICAL ASSOCIATION

The attention of Minnesota physicians is again called to the meeting of the Inter-State Postgraduate Medical Association which takes place in Minneapolis this month.

The scientific program is already in the hands of our members and speaks for itself. The quality of the clinics and addresses can be judged from the names of foreign, Canadian and American leaders that appear in the program. Those who attended the Saint Paul session in 1925 or other former meetings of this Association know what to expect. Almost without exception the program will be furnished by professors or associate professors from medical schools here and abroad.

Five strenuous days of clinics and addresses have been planned. The program will begin at 7:30 each morning and will continue morning, afternoon and evening until the banquet on the evening of the last day.

As at former sessions, the association meets as a unit in one general assembly where subjects of general interest will be presented. In this respect the Association differs somewhat from the A. M. A. meetings and is meeting a distinct demand, as evidenced by the rapidly increasing attendance at its meetings in recent years. The meeting, as the name signifies, is in the nature of a post-graduate course and a lot of authoritative information will be crowded into the five day session. To be a well informed physician the specialist as well as the general practitioner needs this sort of instruction.

PHYSICIANS AND ADVERTISING

Advertising is contrary to the code of medical ethics. The same rule applies to all professions and this is one of the outstanding differences between a profession and a business. While the physician is perforce dependent upon his fees for his livelihood, monetary return is not and should not be the prime consideration. Advertising smacks too much of a purely business proposition.

In a recent editorial the *Minneapolis Journal* takes the profession to task for not changing its code of ethics regarding advertising. The editor thinks we should use this same tool which quackery has so misused and that the public suffers because we fail to inform them as to what we have to offer for the alleviation of physical ills. We cannot agree that the public would be better served if physicians began to advertise.

The physician depends on the quality of service rendered to increase his practice. Of course

there are a number of modifying factors which affect the size of a practice such as personality, association, medical jobs, etc., in addition to scientific ability. Would advertising be of benefit to the public in assisting the able and not the inefficient physician to increase his clientele? We think not.

What would we advertise? Our specialties? Then how about the general practitioners? The diseases we can cure? This presupposes a diagnostic ability on the part of the patient. Or perhaps we should publish our faces? Not so good.

Obviously the newspapers would all favor the adoption of advertising by physicians. How about increasing the cost of medical service? The prohibition of advertising places no physician at a disadvantage.

Most publicity amounts to advertising. This is the reason that the physician to be consistent is inclined to sidestep publicity. This does not mean that the public is deprived of medical information. What with health journals such as *Hygeia* and the *Public Health Journal,* radio broadcasting by national and state medical associations and health articles in newspapers and magazines, the intelligent reader can easily keep posted.

The newspapers themselves are to a certain extent to blame for the usual reticence on medical matters encountered by them. Information, when given, is likely to appear in a distorted, sensational write-up featuring the individual rather than the subject matter. The public is interested in individuals rather than abstract facts, we are told.

Medical groups—so-called clinics—are bound by the same rules of ethics as individual physicians. Articles sometimes appear without the sanction of the individual physician or the group, but not infrequently a group utilizes publicity methods or even solicits patronage in a manner that would be severely criticized in an individual. A hospital sometimes advertises and incidentally the medical group which owns or patronizes the hospital receives publicity. A hospital, in our opinion, should not be operated as a money-making proposition and therefore should not resort to advertising in lay magazines or newspapers.

No, we can see no reasons for changing the status quo of medical advertising and there are many reasons why we should continue to play the game according to the present rules.

MOMENTS OF REST

Men do die of overwork. The young engineer, Holland, and his successor, Freeman, both died probably of overwork during the construction of the Holland tunnel under the Hudson River. The way a man spends his hours away from the office, however, is the theme of this discussion.

Competition was never more strenuous. It becomes apparent in pre-college days, is severe in undergraduate days and becomes most intense in business and professional life. Happy is the individual who learns early how to spend his hours while away from work so as to conserve his energy.

Hobbies are a great asset. But Lord Dawson was right when in a recent address at Winnipeg he warned against the danger of overdoing even the game of golf. He believes many a middle aged man is better off with one round of golf over the week end with plenty of rest, rather than with three rounds and little or no physical relaxation.

How many men return from a so-called hunting trip refreshed? The unaccustomed physical exercise, lack of sleep, and excessive indulgence in drinking and smoking, so commonly accompaniments of an outing, all tend to drain reserve and leave the individual susceptible to infection.

Vacations should be taken by everyone. And yet how often they are spent in ways that are tiring rather than restful. A nerve-racking run may be made by auto across the country or the vacation may be made to assume the nature of a celebration rather than a vacation.

Daily routine which provides for proper physiological rest is most important. The busy man realizes the importance of early to bed. The present day party that begins at bed time and ends at the usual rising hour is a man killer and incompatible with serious work.

The busy man can well afford to break the day by taking the full noon hour for lunch and relaxation, or by even going home for lunch and resting a few minutes after the noon meal. A few are even able to snatch a few minutes of refreshing sleep before returning to the fray.

When middle age is reached, the type of exercise may well be modified. The man following a sedentary occupation is better off if he leaves the more strenuous forms of exercise alone.

Sudden death in the forties from heart disease seems to be on the increase. It certainly has been called to our attention most strikingly of late.

This must be the result of unnecessary wear and tear on the human organism and sclerotic coronary arteries are at the bottom of many of these tragedies.

Shall we eat, drink and be merry for tomorrow we die, or shall we use a little more common sense?

OF GENERAL INTEREST

Dr. H. B. Bayley, formerly of Ceylon, Minnesota, has moved to Fairmont.

Dr. Willis Herbert is practicing at Maynard, Minnesota, following an interneship at St. Mary's Hospital, Minneapolis.

Dr. Philip A. Halper has moved from Saint Paul to Chicago, where he has opened offices at 30 North Michigan Avenue.

Dr. Herbert K. Kent, who completed his interneship at St. Barnabas Hospital, Minneapolis, recently, has located in Portland, Oregon.

Dr. Harlan Alexander has recently become associated in practice with Dr. H. M. Lee in the Physicians and Surgeons Building, Minneapolis.

Dr. Phil Quilling, following his interneship at Asbury Hospital, is assistant to the surgeon for the Great Northern Railroad at Marquette, Michigan.

Dr. Junius Smith, following interneship at St. Barnabas Hospital, Minneapolis, this year is a member of the Medical Corps of the United States Army.

Dr. H. Paul Johnson has established offices at Seventh Street and Eight Avenue South, Minneapolis, for general practice. Dr. Johnson did his interne work at Asbury Hospital.

Dr. Evelyn McLane, who completed her interneship at Asbury Hospital, Minneapolis, this year is associated in general practice with her husband, Dr. Will McLane, at Sleepy Eye, Minnesota.

Dr. N. J. Berkwitz is no longer associated with Dr. W. A. Jones of Minneapolis. He has recently opened a private office in the Medical Arts Building and is limiting his practice to nervous and mental diseases.

Dr. James R. Kingston has located at Grand Rapids, Minnesota, where he is engaged in general practice. Dr. Kingston was an interne at the Abbott Hospital, Minneapolis, where he completed his course July 1.

Dr. E. J. Borgeson of Minneapolis addressed the Chisago-Pine County Medical Society, August 26, at Pine City, on "Diagnosis and Treatment of Chronic Sinus Infections." Dr. C. G. Kelsey of Hinckley read a paper on "Eczema of the Scrotum."

Dr. Sherman Stenberg, who recently completed his interneship at St. Mary's Hospital, Minneapolis, has been practicing in Sisseton, North Dakota, doing relief work for a local practitioner there. He is planning to establish a practice in Hudson, Wisconsin, later.

Dr. J. Allen Wilson has become associated with the Earl Clinic, Saint Paul, after a year spent under Dr. Ralph Brown in gastro-intestinal work at the Presbyterian Hospital in Chicago. The preceding year Dr. Wilson interned at the Ancker Hospital, Saint Paul.

Word has been received of the death of Mrs. Alice Hanson Magnuson, wife of Dr. Paul Magnuson of Chicago. Both Dr. and Mrs. Magnuson lived in Saint Paul before Dr. Magnuson took his medical course and located in Chicago, where he became interested in surgery.

Dr. and Mrs. Clifford E. Alexander of Duluth have left for an extended visit to Vienna and other European clinics, where they expect to remain for about ten months. Dr. Alexander's practice at Duluth is being cared for in his absence by members of the Arrowhead Clinic, of which Dr. Alexander is a member.

Dr. William C. Wright and Dr. Richard L. Hane, formerly associated with The Mayo Clinic, Rochester, have announced the opening of offices in the Medical Arts Building, Fort Wayne, Indiana. Dr. Wright is limiting his practice to general and urological surgery; Dr. Hane to general surgery and surgery of the thyroid.

Dr. Arthur C. Strachauer sailed from New York, September 23, on the steamship Bremen for a tour of Europe and the Orient. He will visit the important surgical and cancer centers at Berlin, Vienna, Munich, Paris and Rome. On the return voyage he will stop at Bombay, Shanghai, Pekin and Honolulu, and will arrive in Minneapolis about April first.

Dr. Leo G. Rigler, with his associates, was awarded the Southern Minnesota Medical Association medal for the best scientific exhibit at the annual meeting of the Minnesota State Medical Association held at Duluth in July. The exhibit, which won the award from the standpoint of originality, practicability and manner of presentation, was a demonstration by roentgenograms of free and encapsulated pleural effusions.

Of the internes who completed their work at St. Mary's Hospital, Duluth, the past year, the following have established practice in the towns and cities mentioned: Dr. Warren Fetterly, Medical Arts Building, Minneapolis; Dr. E. E. Zemke, Fairmont, Minnesota; Dr. O. E. Sarff, Baudette, Minnesota; Dr. W. A. Stafne, Fargo Clinic, Fargo, North Dakota; Dr. N. Lende, Faribault, Minnesota; Dr. R. R. Sullivan, State Department of Health, University Campus, Minneapolis; Dr. V. J. Telford, Edgerton, Minnesota.

CONSULTATION BUREAU

WM. A. O'BRIEN, M.D., *Director*
Minnesota State Medical Association
11 West Summit Avenue
Saint Paul, Minnesota

1. *Question.*—Please outline the treatment for a case of syphilis in the secondary stage. The patient has not had any previous treatment.

   Answer.—The first course of treatment consists of twelve Bismogenol injections of 1 c.c. each into the muscles once every five days. Five days after the last treatment has been given, the neosalvarsan intravenous injections should be started. Give six treatments of not more than .6 grams each one week apart. Three such series of treatments are given the first year, and two in the second and third years.

2. *Question.*—I wish to purchase a carbon dioxide snow apparatus for the treatment of warts. I will probably not use it more than once a month. Please tell me about the least expensive apparatus I can purchase for this purpose.

   Answer.—To make carbon dioxide snow pencils it is necessary to have a tank of carbon dioxide, which is purchased but may be exchanged for another tank, and an adapter for the end, which is a separate piece of apparatus. If you do not intend to use carbon dioxide snow very much, why not get a small cautery? Warts may be treated in this way very successfully. In addition the cautery may also be used for other purposes, including a cauterization of the cervix in cases of chronic cervicitis. This is a splendid way, according to available knowledge of preventing many cases of malignancy of this structure.

3. *Question.*—Again I am taking advantage of your new and convenient department to ask some assistance in a distressing case. A Jewish boy of about twenty-five years has very painful feet which he describes mostly as "burning like fire." When I first saw him I noticed a large amount of callus, which I removed with no apparent benefit. I have had him using tannic acid and it has been of no effect. There is no apparent localized tenderness as in a frank metatarsalgia and no localized flushing as one would find in erythromelalgia. There is no great amount of sweating and, in fact, the most characteristic finding is the normal appearance of the feet. Yesterday I gave him some luminal in Porter's solution, which is a modification of the lead and opium wash and, of course, I do not know what will come of this.

   Answer.—Indefinite burning pain in the feet of any young adult requires a careful examination to rule out possible circulatory disturbance. The fact that this boy is Jewish would make such an examination almost imperative as a diagnostic procedure. I would suggest that the patient be stripped and placed in a sitting position on the edge of a table and palpation of the posterior tibial and dorsalis pedis arteries be carried out bilaterally with an estimation of the pulse pressure by palpation. They might be compared with the radial arteries. With the knees flexed and the muscles relaxed the popliteal artery should be palpated. With the feet dependent, cyanosis or reddening should be noticed. The patient should then lie down and the feet be slowly elevated. If they blanch before they have reached 45° elevation poor circulation is probable. If the patient then contracts all the muscles of the feet (making a fist, so to speak) with the feet elevated, the finger of the examiner can block the posterior tibial artery behind the internal malleolus. Then the patient sits up and hangs the feet over the edge of the table with the artery blocked and an observation is made of the rapidity of returning circulation in the toes, especially the great and second toes. If these remain blanched, there is probably peripheral blocking of the collateral arteries. If there is a history of claudication or cramps in the calf muscles after exercise plus any of the simple examination findings above, I should be very suspicious of endarteritis obliterans, or Buerger's disease. The treatment of this condition depends upon its severity. If there is a spastic element, that is, incomplete blocking, but marked vasomotor changes of a transient but painful character, lumbar sympathectomy is indicated. The indications, however, are dependent upon circulatory efficiency tests measured by special thermometers after foreign protein temperature shocks. Needless to say, protection of the extremities from over-exertion, strain, or irritation of any type is essential. If the case is not serious, good temporary results often occur following the use of intravenous injection of typhoid vaccine in doses of 50 million to 150 million at 4 day intervals over a period of three weeks. Twenty-four hour hospitalization is necessary for each dose, and the good effects require a rather marked temperature rise.

   Other diagnostic possibilities are:

   1. Raynaud's disease. Patients with this condition are usually females and the attacks are provoked by cold. You did not state in your question what produced the pain or whether it was constantly present.

   2. Peripheral neuritis. This is usually unilateral and involves either the peroneal or saphenous nerves.

   3. Verruca plantaris under the calluses. They would cause a great deal of discomfort and may be found by examining the surface after the calluses are removed.

   4. Arsenical dermatitis might produce lesions, but there would be a history of the drug.

   The consensus of opinion seems to be that the patient has a vascular disease, and the most likely type is Buerger's disease.

MISCELLANEOUS

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

Indian Doctor Given Sixty Days in Jail

State of Minnesota *vs.* Starr

On August 26, 1930, Lester Starr was arrested at Spring Grove, Minnesota, charged with practicing healing without a Basic Science certificate. The defendant was a member of a group of Indian doctors who were selling roots and herbs in Fillmore and Houston Counties for the past two months. Their charges ranged from ten to sixty dollars per person and it has been conservatively estimated that they took in $4,000 during the time they were in that vicinity. The defendant waived his preliminary hearing and was held to the District Court under bond of $1,500, which he was unable to furnish. On September 9, Starr entered a plea of guilty before the Hon. Karl Finkelnburg, Judge of the District Court. The Court sentenced the defendant to sixty days in the Houston County jail. The Court denied a plea for a suspended sentence, which means that the defendant will have to serve his time.

Excellent coöperation was received by Mr. Brist, representing the State Board of Medical Examiners, from William E. Flynn, County Attorney, and Arthur C. Brown, Sheriff. It is also felt that Judge Finkelnburg is to be highly commended for his fair but firm attitude in dealing with people who go around the community preying on the sick and extracting their money through this type of swindle.

Unlicensed "Doctor" Fined $300.00

State of Minnesota *vs.* Knapp

On August 18, 1930, J. Knapp, 65 years old, of 522 South Eighth Street, Minneapolis, and 7 E. Tenth Street, St. Paul, was fined $300 or three months in the Workhouse by the Honorable J. C. Michael, Judge of the District Court of Saint Paul, for practicing medicine without a Basic Science Certificate. Defendant paid the fine.

Knapp had been posing as a specialist in rheumatism, nervousness and stomach disorders. He claimed to have a cure for all stomach ailments except cancer. He has been operating in St. Paul and Minneapolis over a period of the last five or six years. The defendant is a man with no medical education and has followed the barber and painting trades during his lifetime.

The case was handled by Mr. Brist on behalf of the Minnesota State Board of Medical Examiners and splendid coöperation was received from C. D. O'Brien, Jr., County Attorney of Ramsey County, in effecting a speedy disposal of this case.

REPORTS AND ANNOUNCEMENTS OF SOCIETIES

MEDICAL BROADCAST FOR THE MONTH

The Minnesota State Medical Association Morning Health Service

The Minnesota State Medical Association broadcasts weekly at 10:15 o'clock every Wednesday morning over station WCCO, Minneapolis and St. Paul (810 kilocycles or 370.2 meters).

Speaker: William A. O'Brien, M.D., Associate Professor of Pathology and Preventive Medicine, Medical School, University of Minnesota.

The program for the month of October will be as follows:

October 1st—Finish the Job
October 8th—Cancer of the Rectum
October 15th—Father of Medicine
October 22nd—Food Fads
October 29th—Finger Infections

INTER-STATE POST-GRADUATE ASSOCIATION OF NORTH AMERICA

Minneapolis Auditorium

October 20 to 24, inclusive

Officers of the Association

President—Dr. William D. Haggard, Nashville, Tennessee

Presidents of Clinics—Dr. William J. Mayo, Rochester, Minnesota; Dr. Charles H. Mayo, Rochester, Minnesota

President-Elect—Henry A. Christian, Boston, Massachusetts

Managing Director—Dr. William B. Peck, Freeport, Illinois

Executive Secretary and Director of Exhibits—Dr. Edwin Henes, Jr., Milwaukee, Wisconsin.

Treasurer and Director of Foundation Fund—Dr. Henry G. Langworthy, Dubuque, Iowa

Speaker of the Assembly—Dr. George V. I. Brown, Milwaukee, Wisconsin

Chairman of Program Committee—Dr. George W. Crile, Cleveland, Ohio

The meetings will be held under the supervision of the Hennepin County Medical Society, Dr. E. L. Gardner, president, and Dr. E. W. Hansen, Secretary.

The Executive Committee consists of Dr. N. O. Pearce, general chairman, and Dr. J. C. Litzenberg and Dr. James S. Reynolds, general vice-chairmen.

The following local committee chairmen have been appointed:

Dr. F. A. Erb—Auditorium
Dr. A. T. Mann—Banquet
Dr. Claude J. Ehrenberg—Entertainment
Dr. J. S. Reynolds—Finance
Dr. Angus W. Morrison—Foreign Guests
Dr. W. A. Fansler—Hotels
Dr. R. O. Beard—Publicity

(Continued on Page 727)

A PAGE FORUM OF THE COMMITTEE ON PUBLIC HEALTH EDUCATION

For Better Newspaper Medicine

Dr. Gilbert Seaman of Milwaukee Suggests a Cure for Editorial "Double Pneumonia"

Most physicians concede, nowadays, that they have a definite obligation to educate the public in matters of personal hygiene, public health and preventive medicine.

Official agencies for the dissemination of authoritative information in these matters are growing. They are the accredited organs of organized medical societies and no one doubts that the good they are capable of doing is incalculable both for the lay public and the doctor.

But the doctor must not consider that his public obligations end with these services, in the opinion of Gilbert Seaman of Milwaukee.

Newspapers still deal in "double pneumonia" and deaths from indiscriminate "ptomaine poisoning," to mention only minor medical delinquencies. They are still occasionally given to distorting medical facts and distressing individual physicians for the sake of human interest "features."

Dr. Seaman urges a better coöperation between the doctor and the editor in a pertinent and interesting paper called "The Doctor Looks at Journalism," read in Milwaukee recently. The editor, and, through him, the public, is entitled to the real facts of scientific medicine.

"Whether or not the doctor is practicing in private or public hospitals or in private practise, he is a servant of the public and should take an active interest in the dissemination of accurate medical information," says Dr. Seaman.

"The whole scheme of preventive medicine depends upon education of the public. You cannot drive people to protect themselves against disease. They must have accurate information on medical matters even when these matters are incidental to the day's news. The newspaper's business is to furnish news in which the public is interested, and this the newspaper man knows how to do. But it is not necessary to distort medical news to do it.

"There must be a better understanding between the press and the medical profession. Ready sources of medical information should be provided by medical societies, colleges and libraries.

"Too often the personality of the doctor and not the essential medical facts are the theme of a newspaper story. The press is not entirely guiltless in arbitrarily putting the wrong emphasis on its medical news. But it is a fact that far too often this tendency to distort and play upon the human interest element is due to complete ignorance of the medical facts, coupled with complete inability to get at those facts.

"A proper well established channel of information between the editor and local medical profession would do a great deal to avoid such things. It would operate, also, to prevent the publication of much news that is unsuitable from the standpoint of the medical profession."

(Continued from Page 725)

Dr. C. B. Wright—Reception
Dr. O. S. Wyatt—Registration
Drs. W. A. O'Brien and E. F. Robb—Scientific Exhibits
Dr. E. C. Robitshek—Transportation
Dr. James M. Hayes—Clinics
Mrs. Emil Geist—Ladies

The International Medical Assembly is the opportunity of a week's intensive graduate study in Medicine, presented by the Inter-State Postgraduate Medical Association of North America. It is to be held this year from October 20th to 24th, inclusive, at the Minneapolis Auditorium.

The Association is unique, among medical organizations, in respect of the fact that aside from a few life members, it has no regular membership. Under a registration fee of $5.00 any physician in good and regular standing, in the American and Canadian Medical Associations, and their component parts, is a member of the Assembly, for the purposes of this meeting. He does not become, thereby, a member of the Association. Life-members are exempt from the registration fee. They will present their life membership cards. The courtesies of the Assembly are extended to Army, Navy, Marine Corps and Veterans Bureau officers, and to full-time officers and officials of local, State and National Public Health Services, upon presentation of their credentials. All physicians should come prepared to show their County, State or National Society Membership cards.

A registration bureau will be set up at the Hotel Nicollet, on Sunday morning, October 19, and local physicians of City, County or State are requested to register in advance of the meeting. Local committeemen are asked, also, to register in advance of the opening of the Assembly.

The Main Registration Bureau will be placed at one end of the Exhibit Hall on the lower level of the Auditorium. It will open on Monday morning, October 20, 1930, in season for the first session of the assembly. On and after this date all registration will be conducted in this Main Registration Bureau. Ladies will be asked to register at a special bureau and distinctive badges will be issued to the men and the women.

All physicians must register.

The plan of program for the International Medical Assembly is as unique as its membership plan. The opening session of the Scientific Program will begin promptly at 7:30 o'clock, Monday morning, October 20, 1930. The organization is essentially a hard-working one. This early morning hour will mark the rising bell of business for the Assembly each day. The morning hours of the entire meeting will be occupied by a succession of diagnostic clinics. There will be an intermission at noon, presumably for luncheon, but it will be immediately followed, at an unstated hour, by two or three more diagnostic clinics.

The afternoon sessions will be devoted to a series of addresses. Both morning and afternoon meetings will be broken by intermission to permit of visits to the Technical and Scientific Exhibits. Evening sessions on each day, excepting Friday, October 24th, will be held, at which a number of addresses will be given.

In the four days' meeting, 38 diagnostic clinics, 84 addresses and 118 exhibits will be presented. The program could hardly be more compact, while practically every branch of medicine and surgery is covered by its papers.

It is the aim of the Inter-State Postgraduate Medical Association, in its annual International Assemblies, to present to the Medical Profession every well-validated advance in medical science and every approved product of research related to it.

It devotes itself exclusively to post-graduate medical education. It exercises no political influence. It enters into no legislative activities.

Every physician of the Twin Cities and of the state at large is invited to share the outstanding values of these meetings of the International Medical Assembly. Set aside this week for a visit to Minneapolis and spend it at the Auditorium!

ANNOUNCEMENT EXTRAORDINARY

One of the outstanding events of the coming Inter-State Post Graduate Medical Association meeting in Minneapolis will be the banquet at the Nicollet Hotel, Friday evening, October 24. On the speakers' program will be many distinguished guests, both lay and medical, some of whom have come a great distance from different parts of the world.

The banquet at the Saint Paul meeting of this organization some years ago has often been commented upon as having been the best in the history of the Association and it is naturally desirable that the Northwest should covet such distinction in an equally or even more successful occasion in Minneapolis. In the promotion of such success the physicians of the entire Northwest are earnestly requested to assist.

Physicians may bring their wives and it is expected that some interested laymen will want to attend. The available seating being limited, those desiring to attend are requested to make reservations early by sending a check for cover charges at $5.00 a plate to Dr. A. E. Hedback, chairman of the Ticket Committee, care of Hennepin County Medical Society, Medical Arts Building, Minneapolis.

SOUTHERN MINNESOTA MEDICAL ASSOCIATION

At the annual meeting of the Southern Minnesota Medical Association held in Mankato August 25, the following officers were elected:

Dr. J. T. Schlesselman, Mankato, president
Dr. I. W. Steiner, Winona, first vice-president
Dr. P. F. Holm, Wells, second vice-president
Dr. M. C. Piper, Rochester, secretary-treasurer

One hundred and fifty-one physicians registered at the meeting and fifty-three new members were taken into the Association.

Dr. R. T. Westman of Cloquet was awarded the medal for the medical student at the University show-

ing the highest degree of proficiency in clinical fields of medicine and surgery during junior and senior years.

Dr. L. G. Rigler of Minneapolis was awarded the society medal for the best display in the scientific exhibit at the State Medical Meeting at Duluth in July.

AMERICAN PUBLIC HEALTH ASSOCIATION

The 59th annual meeting of the American Public Health Association will be held in Fort Worth, Texas, October 27 to 30.

Public health workers of Canada, Mexico and Cuba, as well as those of the United States, will contribute to the extensive program arranged. Among the speakers will be the president of the Association, Dr. A. J. Chesley, of Minnesota, and the president-elect, Dr. Hugh S. Cummings, Surgeon General of the Public Health Service.

Among interesting features arranged in connection with the meeting are a Texas barbecue and a rodeo. Special trips to Austin, San Antonio and to Mexico City have been arranged. Further details may be obtained from Homer N. Calver, Executive Secretary of the Association, at 370 Seventh Avenue, New York City.

NORTHERN MINNESOTA MEDICAL ASSOCIATION

Dr. B. S. Adams of Hibbing was elected president of the Northern Minnesota Medical Association at the closing session of its annual convention at Moorhead, Minnesota, September 20. Other officers chosen, in addition to Dr. Adams, who succeeds Dr. H. C. Cooney of Princeton, are Dr. G. S. Wattam of Warren, vice president, and Dr. O. O. Larson of Detroit Lakes, secretary-treasurer.

Hibbing was chosen as the convention city for 1931.

SCOTT-CARVER COUNTY MEDICAL SOCIETY

On August 12, 1930, the Scott-Carver County Medical Society met at Dr. F. Buck's cottage on Prior Lake. Dr. Reuben Johnson was the principal speaker and gave an address on "Serum Reactions." It was decided to hold the next meeting at Waconia in September, in charge of Dr. H. D. Nagel.

B. H. Simons, *Secretary.*

VIOSTEROL OR IRRADIATION

If rickets is the disorder that is to be cured or averted, both cod liver oil and irradiated ergosterol, the latter now available as viosterol in oil 100 D, act as specifics; so that irradiation with artificial light sources is not essential though its effectiveness to accomplish the same ends deserves emphasis. Viosterol also serves to promote the proper metabolism of calcium and phosphorus in other disorders. On the other hand, irradiation with ultraviolet rays doubtless produces a variety of physiologic effects about which we are still largely uninformed. (Jour. A.M.A., February 22, 1930, p. 580.)

PROGRESS

Abstracts to be submitted to Section Supervisors.

Members are urged to abstract valuable articles which they run across in their reading and send the abstracts to the physicians in charge of the respective sections. In order to avoid duplication it would be well to communicate with one of the section supervisors before the article is abstracted.

SECTION SUPERVISORS

EYE, EAR, NOSE AND THROAT

Virgil J. Schwartz, M.D.
617 Medical Arts Bldg.
Minneapolis, Minn.

Arthur C. Dean, M.D.
Hot Springs, S. D.

GYNECOLOGY AND OBSTETRICS

Archibald L. McDonald, M.D.
Lyceum Building
Duluth, Minn.

L. W. Barry, M.D.
810 Lowry Medical Arts Bldg
Saint Paul, Minn.

MEDICINE

F. J. Hirschboeck, M.D.
205 West Second Street
Duluth, Minnesota

Thomas A. Peppard, M.D.
Medical Arts Bldg.
Minneapolis, Minnesota

PEDIATRICS

Chester A. Stewart, M.D.
951 Medical Arts Bldg.
Minneapolis, Minnesota

Roy N. Andrews, M.D.
Mankato Clinic
Mankato, Minnesota

ROENTGENOLOGY

Leo G. Rigler, M.D.
University Hospital
Minneapolis, Minnesota

A. U. Desjardins, M.D.
Mayo Clinic
Rochester, Minnesota

SURGERY

Donald K. Bacon, M.D.
456 Lowry Medical Arts Bldg.
Saint Paul, Minnesota

Verne C. Hunt, M.D.
Mayo Clinic
Rochester, Minnesota

EYE, EAR, NOSE AND THROAT

ABSCESS OF THE BRAIN FROM THE STANDPOINT OF THE OPHTHALMOLOGIST: Wm. L. Benedict (Trans. of the Amer. Acad. of Oph. and Otolaryng., 1929, p. 52). The history of the onset of the pathologic process is very important as none of the ocular signs or symptoms are pathognomonic. Even then we must also consider extradural abscess, osteomyelitis of the skull, and tumor of the dura with softening or hemorrhage, as these are conditions which may occur concomitant with diseases of the sinuses or mastoid.

The development of brain abscess may be divided into three stages: (1) the initiatory stage, characterized by severe pain in the head, vomiting, rigor and fever; (2) the second stage, characterized by pain in the head (which can be elicited only by percussion), slow cerebration, want of sustained attention, apyrexia, slow pulse, paralysis and optic neuritis; (3) the third stage, wherein there is leakage of pus into the membranes or ventricles, accompanied by fever, convulsions

and coma; or else there is complete encapsulation of the abscess, which may become quiescent for a long period and may finally become absorbed, in some cases without surgical interference.

The most common sign found is choked disc, occurring in about one-third of the cases. While the abscess is developing, the choked disc fluctuates in appearance, becoming stationary when the abscess becomes encapsulated. At this time surgery should be undertaken. Choked disc usually appears bilaterally, but the edema on the two sides is frequently of different degree. This does not greatly help in localization as it may be advancing on one side and receding on the other. In certain lesions of the frontal lobe, direct pressure may cause atrophy with or without previous choked disc.

Peripheral vision changes have the same significance in brain abscess as they have in brain tumor. The most characteristic alteration is hemianopsia and is dependent on the site of the lesion. Homonymous hemianopia appears in temporal lobe abscesses if they are subcortical and affect the optic radiations. It is also found in lesions of the occipital lobe. Characteristic field changes are rare in frontal lobe lesions.

Nystagmus, which may be horizontal, vertical or rotatory, is particularly common in cerebellar abscesses.

Signs of partial paralysis of the third nerve are most often associated with abscess of the temporal lobe and nearly always with choked discs. Paralysis of the sixth nerve has no localizing value.

L. G. FLANAGAN, M.D.

PEDIATRICS

THE USE OF PHENOBARBITAL IN INFANT FEEDING: E. J. Barnett, M.D., Spokane, Wash. (Arch. of Ped., Vol. XLVII, No. 7, July, 1930). Phenobarbital in infant feeding is much more valuable than is ordinarily known. The use of phenobarbital has become almost routine with us, not only in cases of pyloric stenosis and pylorospasm, but also in infants suffering with severe colic.

The "vomiting center" in the brain must be involved in pyloric stenosis, otherwise it would be difficult to explain why phenobarbital is apparently so specific for the control of the projectile vomiting. The "vomiting center" in cases of pyloric stenosis must become more sensitive from gastric irritation of the vagus or sympathetic nerve endings, and vomiting results.

The extensive use of atropine in pyloric stenosis and colic has usually been justified on its value as an antispasmodic. It is quite possible that atropine has the same effect as phenobarbital on control of vomiting by its impairment of the afferent emetic impulses along the vagus to the "vomiting center" in the brain. The advantage of phenobarbital over atropine is the absence of alarming febrile reactions as is so often observed with the use of atropine alone.

It has been emphasized that all the barbital derivatives exert their effects most markedly when the patient is kept in quiet surroundings away from nervous excitement.

Phenobarbital is available in one quarter grain tablets. We have found that a tablet of this size, crushed, and given before or in each feeding, is the largest dose necessary to control the most obstinate or severe curable case of colic or vomiting. The average case requires only one-eighth of a grain dose. We have made a practice of combining one drop of a fresh 1:1000 solution of atropine sulphate with each dose of the phenobarbital. We have not observed cases of "atropine fever," when the two drugs have been combined.

R. N. ANDREWS, M.D.

TREATMENT OF INFANTILE ECZEMA: Harry D. Grossman, M.D., Chicago (Arch. of Ped., August, 1930, Vol. XLVII, No. 8). The treatment of infantile eczema is entirely empirical today, despite the large amount of work which has been done attempting to show that this skin disease is due to the various factors in the diet of infants, such as proteins, fats, carbohydrates, and fruit juices.

Except in very rare instances, removal of butter-fat, excess sugars, orange juice and food proteins produces no relief from either the subjective symptoms or the objective findings, unless local treatment is used at the same time.

Infantile eczema responds, usually, very nicely and fairly quickly, to crude coal tar used in a suitable ointment base, so that it seems rather sorrowful that it is not used more extensively by the medical practitioner generally, and the dermatologist specifically.

In severe cases, characterized by marked redness with much weeping and marked crusting accompanied by severe itching, the author usually starts with the following ointment applied twice daily, morning and night:

Crude coal tar	6.0
Zinc Oxide	....
Powdered starch	4.0
Petrolatum q. s. ad.	30.0

The ointment is removed in the morning with sweet oil or olive oil, and then new ointment is re-applied.

The stage in which the weeping and crusting are absent, and in which the skin is red and rough, may be characterized as of moderate severity, and for this the author reduces the strength of the ointment to ten per cent crude coal tar, using the same base.

The redness and roughness of the skin disappear more slowly than do the weeping and crusting, but usually in 7 to 14 days on this second salve the skin is smooth and may be almost normal in color or a bit pinker than normal. As the skin improves, the strength of the ointment should be again reduced, this time to five per cent, and applied twice daily for seven to ten days even though the skin looks normal.

Any tendency to recurrence of the eczema is countered by an application of the five per cent ointment.

R. N. ANDREWS, M.D.

BOOK REVIEWS

Books listed here become the property of the Ramsey and Hennepin County Medical libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

BOOKS RECEIVED FOR REVIEW

TEXT-BOOK OF HISTOLOGY. Harvey Ernest Jordan, A.M., Ph.D. Professor of Histology and Embryology, University of Virginia. 857 pages. Illus. New York: D. Appleton & Company, 1930.

NERVOUS INDIGESTION. Walter C. Alvarez, M.D., Associate Professor of Medicine, University of Minnesota (The Mayo Foundation). 297 pages. Price, $3.75. New York: Paul B. Hoeber, Inc., 1930.

DIETETICS AND NUTRITION. Maude A. Perry, B.S., formerly Director of Dietetics at the Michael Reese Hospital, Chicago, and at Montreal General Hospital. 332 pages. Price, $2.50. St. Louis: C. V. Mosby Company, 1930.

GONOCOCCAL INFECTION IN THE MALE. Abr. L. Wolbarst, M.D., Urologist and Director of Urologic Clinic, Beth Israel Hospital; Consulting Urologist, Central Islip State Hospital, Manhattan State Hospital, etc. 297 pages. Illus. Price, $5.50. St. Louis: C. V. Mosby Company, 1930.

PERSONAL AND COMMUNITY HEALTH. Clair Elsmere Turner, M.A., Dr.P.H. Professor of Biology and Public Health, Massachusetts Institute of Technology, etc. 443 pages. Illus. Price, $2.75. St. Louis: C. V. Mosby Company, 1930.

PRINCIPLES AND PRACTICE OF MEDICINE. Sir William Osler, Bart., M.D., F.R.S. Eleventh Edition Revised by Thomas McCrae, M.D. 1237 pages. Illus. New York: D. Appleton & Company, 1930.

LABORATORY PEDIATRICS (Vol. XX, Clinical Pediatrics). John D. Lyttle, A.B., M.D., Assistant Clinical Professor of Diseases of Children, College of Physicians and Surgeons, Columbia University, etc. 189 pages. Illus. New York: D. Appleton & Company, 1930.

COMPOSITE INDEX AND CUMULATIVE SUPPLEMENT (Vol. XXI, Clinical Pediatrics). 385 pages. New York: D. Appleton & Company, 1930.

DISEASES OF THE GENITO-URINARY SYSTEM IN INFANCY AND CHILDHOOD. Henry F. Helmholz, M.D., Professor of Pediatrics, University of Minnesota (The Mayo Foundation), etc.; and Samuel Amberg, M.D., Associate Professor of Pediatrics, University of Minnesota (The Mayo Foundation), etc. 239 pages. Illus. New York: D. Appleton & Company, 1930.

WANTED—Position as physician's office assistant or clinic assistant, by registered nurse with several years' experience. Address D-103, care MINNESOTA MEDICINE.

POSITION WANTED—As assistant to hospital superintendent. Experienced. Can furnish excellent references. Address D-104, care MINNESOTA MEDICINE.

WANTED—Salaried appointments for Class A Physicians in all branches of the medical profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan Ave., Chicago. Established 1896. Member The Chicago Association of Commerce.

PHYSICIAN'S OFFICE FOR RENT—Best location Midway district, corner Thomas and Hamline, Saint Paul. Rent $25.00 a month. Inquire at dentist's office.

FOR SALE—Practice in southwestern Minnesota. Good town in best farming part of state, nearest doctor nine miles. Best reasons for selling and all asked is to take the home. Address D-100, care MINNESOTA MEDICINE.

WANTED—First class eye, ear, nose and throat specialist to become associated with a group of physicians in Minneapolis. Overhead expenses on percentage basis. State age and place of special training. Address D-99, care MINNESOTA MEDICINE.

FOR SALE—Wonderful opportunity for surgeon. Eighteen room hospital. Operating room. Modern. Good practice, rich country. Building cost $21,000, priced $6,000. Small cash payment. Will send photo. Address Wallace King, Waverly, Minnesota.

POSITION WANTED—Technician with three years' experience in hospital and clinical laboratories desires location. Address D-98, c/o MINNESOTA MEDICINE.

FOR SALE—Complete office, reception and examining room equipment. Office for rent, Lowry Medical Arts Building, $30 per month. Call Dale 7748.

WANTED—Position as assistant, partner or location for general practice. Minnesota graduate; one year interneship General Hospital, Minneapolis; two years assistantship in general practice; one year's surgical residency. Good references. Address D-101, care MINNESOTA MEDICINE.

LOCUM TENENS DESIRED by well qualified physician. Licensed in Minnesota. Available at once. Address D-102, care MINNESOTA MEDICINE.

MINNESOTA STATE MEDICAL ASSOCIATION

SIXTY-SECOND ANNUAL SESSION

DULUTH, MINNESOTA

PROCEEDINGS OF THE HOUSE OF DELEGATES

FIRST MEETING, MONDAY AFTERNOON, JULY 14, 1930

The meeting of the House of Delegates of the Minnesota State Medical Association, held in the English Room of the Hotel Duluth, Duluth, Minnesota, convened at 2:10 o'clock, Dr. S. H. Boyer, President of the Association, presiding.

PRESIDENT BOYER: The meeting of the House of Delegates will come to order.

The Chair has appointed a Credentials Committee consisting of: Dr. E. S. Boleyn of Stillwater, Dr. S. H. Baxter of Minneapolis, Dr. A. W. Adson of Rochester, and we are ready to listen to its report. Is the committee ready to report?

DR. BOLEYN (Stillwater): There are fifty-one accredited members present.

The following delegates were present:

Blue Earth County—J. T. Schlesselman, Mankato; Blue Earth Valley—Not represented; Camp Release District—M. S. Nelson, Granite Falls; Central Minnesota—H. C. Cooney, Princeton; Chisago-Pine County—F. F. Callahan, Pokegama; Clay-Becker—R. E. Scott, Detroit Lakes; Dodge County Medical Society—D. E. Affeldt, Kasson; Freeborn County—W. L. Palmer, Albert Lea; Goodhue County—Not represented; Hennepin County—W. A. Fansler, E. K. Green, W. A. Jones, J. A. Myers, C. B. Wright, S. H. Baxter, N. O. Pearce, F. A. Erb, Ivar Sivertsen, H. B. Hannah, Donald McCarthy; Houston-Fillmore County—Not represented; Kandiyohi-Swift—C. L. Scofield, Benson; Lyon-Lincoln—Not represented; McLeod County—Not represented; Meeker County—A. W. Robertson, Litchfield; Mower County—C. L. Sheedy, Austin; Nicollet-Le Sueur—Not represented; Olmsted County—Waltman Waters, F. A. Willius, A. W. Adson, W. F. Braasch, L. W. Pollock, P. A. O'Leary, H. M. Conner; Park Region District—A. D. Haskell, Alexandria; Ramsey County—E. M. Hammes, H. J. Rothschild, O. W. Holcomb, Carl B. Drake, V. P. Hauser, F. H. Neher; Redwood-Brown—George B. Weiser, New Ulm; Red River Valley—H. M. Blegen, Warren; O. E. Locken, Crookston; Rice County—A. M. Hanson, Faribault; St. Louis County—B. S. Adams, Hibbing; J. R. Manley, Duluth, F. H. Magney, Duluth, C. L. Haney, Duluth; Scott-Carver—W. F. Maertz, New Prague; Southwestern Minnesota—Wm. A. Piper, Mountain Lake, F. M. Manson, Worthington; Stearns-Benton—C. B. Lewis, St. Cloud; Steele County—A. B. Stewart, Owatonna; Upper Mississippi—J. A. Thabes, Brainerd, F. F. Kumm, Wadena; Wabasha County—W. H. Replogle, Wabasha; Waseca County—B. I. Saliterman, Janesville; Washington County—E. S. Boleyn, Stillwater; Watonwan County—B. H. Haynes, Butterfield; West Central Minnesota—Not represented; Winona County—C. P. Robbins, Winona; Wright County—A. M. Ridgway, Annandale.

PRESIDENT BOYER: We are now ready to consider the minutes of the last meeting. The minutes are rather long and have been published in MINNESOTA MEDICINE, so the reading of them may be dispensed with unless you desire otherwise. What shall we do with the minutes of the last meeting?

A motion was made and seconded that the reading of the minutes of the last meeting be dispensed with and the minutes accepted, which motion, being put to a vote, was carried.

PRESIDENT BOYER: The first report this afternoon is that of the President of the Council, Dr. H. M. Workman, of Tracy.

Dr. Workman read the report of the President of the Council.

MEETING OF THE COUNCIL

A meeting of the Council of the Minnesota State Medical Association was held on Sunday, July 13th, 1930, at 6:30 P. M. at the Hotel Duluth, Duluth, Minnesota, Dr. Workman, President of the Council, presiding.

The following were present: H. M. Workman, W. H. Condit, W. A. Coventry, M. S. Henderson, F. A. Dodge, G. S. Wattam, W. W. Will, F. J. Savage, L. Sogge, S. H. Boyer, A. G. Schulze, E. A. Meyerding.

The minutes of the meeting of the Council on January 10 were read and approved.

Dr. Schulze read the Treasurer's report for the year 1929.

Dr. Savage, chairman of the Finance Committee, read the report of the Fiscal Agency Account, with a statement of property. The report was accepted and placed on file.

The second quarterly report from MINNESOTA MEDICINE was read and approved. The profit for MINNESOTA MEDICINE for 1929 was $1,081.52.

Dr. Pearce, Chairman of the Committee on Hospitals and Medical Education, appeared before the Council telling of the plans of his committee for the remainder of the year. Motion made by Dr. Coventry, seconded, and carried that the budget of the Committee on Hospitals and Medical Education be increased $100 for 1930.

A report of the membership of the Association was read. There are at the present time 2,035 paid members.

Motion made by Dr. Savage, seconded, and carried that Dr. Thomas G. Lee of Minneapolis be recom-

mended to the House of Delegates for Associate Membership in the Minnesota State Medical Association.

Motion made by Dr. Schulze, seconded, and carried that Dr. Donald Smelzer, formerly of St. Paul, and now residing in Pennsylvania, be recommended to the House of Delegates for Associate Membership in the Minnesota State Medical Association.

Motion made by Dr. Savage, seconded, and carried that Dr. John F. Noble be recommended to the House of Delegates for Associate Membership in the Minnesota State Medical Association.

A list of the Affiliate Fellows elected at the Detroit Session of the American Medical Association was read.

Motion made by Dr. Sogge, seconded, and carried that the Council recommend to the House of Delegates the granting of a charter to form the Dakota County Medical Society as requested in the petition presented.

Motion made by Dr. Boyer, seconded, and carried that a letter be written to the secretary of the Minnesota Funeral Directors Association calling his attention to the law that makes it compulsory for the physician to sign a death certificate and suggesting that he call this to the attention of the physician when asking him to sign such a certificate.

The reports of the Councilors were received and placed on file.

Dr. Boyer's letter to Mrs. Mendenhall, president of the Parents-Teachers Association, was read. The Attorney General's opinion *re* pre-school examination was read. It was suggested that these letters and Mrs. Mendenhall's reply to Dr. Boyer be read before the House of Delegates.

The Minnesota State Medical Association did not have a representative at the U. S. Pharmacopeia Meeting as Dr. Hirschfelder could represent only one organization, the University.

Motion made by Dr. Henderson, seconded, and carried that Drs. H. M. Johnson and W. F. Braasch be recommended to the House of Delegates for re-election as delegates to the American Medical Association for a period of two years beginning January 1, 1931.

Motion made by Dr. Coventry, seconded, and carried that Drs. B. S. Adams and O. J. Hagen be recommended to the House of Delegates for re-election as alternate delegates to the American Medical Association for a period of two years beginning January 1, 1931.

The reports to be presented to the House of Delegates were discussed:

Dr. Coventry was appointed a committee of one to draw up an amendment to the By-Laws to be presented to the House of Delegates abolishing the Committee on Necrology. The Necrologist's report will become one of the duties of the Historical Committee.

Motion made by Dr. Boyer, seconded, and carried that the name of Robert Emmett Farr be commended to the Nobel Prize Committee for consideration in reference to his original work in local anesthesia, in particular that of splanchnic nerve anesthesia.

Motion made by Dr. Condit, seconded, and carried that the Secretary's salary be increased $100 a month.

The meeting adjourned at 12:35 A. M.

PRESIDENT BOYER: Gentlemen, what will we do with the report of the President of the Council?

A motion was made and seconded that the report be accepted, which motion was carried.

DR. MYERS (Minneapolis): I move that the House of Delegates extend to the Council, and to Dr. Workman especially, a vote of thanks.

This was done.

PRESIDENT BOYER: Gentlemen, whether you like it or not, this profession is no longer an austere and closed cloister body. We have no business to think of ourselves as being set apart with a special knowledge which entitles us to special consideration. You have to take part in the things that are going on. You must enter into the mode of the world today, and you must expect that there will be continued expense in the maintenance of your organization and the carrying on of the work involved, and you must expect that from time to time there will be increases in the expenses, and you must expect that from time to time the expenses will grow less, dependent upon the conditions that exist.

I wish to introduce a guest that we have with us today, the Secretary of the American Medical Association. I take pleasure in introducing to you Dr. Olin West. (Applause.)

DR. WEST (Chicago): Mr. Chairman, and gentlemen of the House of Delegates: I sincerely appreciate this courtesy extended to me. I have no desire whatever to impose upon your time. I know you have many things to deal with, and I don't want to interfere with your program. I listened with real delight to the report of the Council submitted by its honored Chairman. I recall very distinctly my attendance at a meeting of the Minnesota Medical Association some six or eight years ago, and it is perfectly evident to me, who am interested, of course, in the activities of all state medical associations that are constituent units of the American Medical Association, that the Minnesota State Medical Association has made notable progress, and I am convinced from the comments I have heard expressed here upon the interest your representatives take in the House of Delegates of the American Medical Association, from the improvement that has been made in its official organ and from the positions that are being taken by members of this Association, that the Minnesota State Medical Association has set its eye to the pinnacle and it is going to continue to progress. I am very grateful indeed to you, Mr. Chairman, for your courtesy, and am glad to have the opportunity of being here today. (Applause.)

PRESIDENT BOYER: We have the honor, gentlemen, of having as a guest today, Mr. W. J. Burns, the Executive Secretary of the Wayne County, Michigan, Society. Wayne County is that district in which the small town of Detroit has its being. I would like to call upon Mr. Burns for a few remarks. (Applause.)

MR. BURNS (Detroit): I think my remarks can be epitomized in this little note I received before I left Detroit from Dr. Warnshuis. He says:

"Dear Red: When you go to Duluth you are commissioned by me to extend to the Minnesota doctors

Michigan's fraternal greetings and good wishes. We join with them in a concerted, sustained activity to convey the truths and principles of modern scientific medicine to the people in order to enhance their health welfare. We seek to provide our members with opportunities for post-graduate work in order that their service may reflect the knowledge of today. We strive to defeat the machinations of the quack and of those who along political lines seek to lower the qualifications for practice. In these activities we note with favor the achievements of the Minnesota profession and bid them to continue their militant attitude. Such achievements are an inspiration to all who are concerned with an attainment of the ideals of medicine.

Sincerely,

F. C. WARNSHUIS."

That is all I have to say, except that I want to thank you for the opportunity of making these few remarks, and I want to ask you to come back to Detroit for another American Medical Association meeting if Dr. West decides it will be there very soon. (Applause.)

PRESIDENT BOYER: I am sure we all appreciate the remarks of Mr. Burns.

Next is the report of the President of the Association.

PRESIDENT'S REPORT TO THE HOUSE OF DELEGATES

Gentlemen:

The work done so far this year has been largely in the field of medical organization, with occasional visits to other medical organizations in a representative capacity.

There were five meetings of the program committee, all of which were attended by the president. At the meeting in February of the American College of Physicians an address of welcome was extended in the interest of the State Association. About the same time a meeting was called of the chairmen and members of the various committees with the idea of correlating various committee work and establishing an interest on the part of the various committee members in the work assigned to them. The day following this meeting there was a special meeting of the legislative committee.

On the 5th of April there was a conference with the executive committee of the Hennepin County Medical Society to consider financial matters. In April the meeting of the Ramsey County Medical Society was attended also. The special purpose in this case was a discussion of State Society dues. It may be well to state at this point that almost uniformly through the state the present dues meet with approval on the part of the component societies and members.

The spring meeting of the Upper Mississippi Valley Medical Association was attended at the request of its membership. The society desired information concerning various state activities. Organization meetings were attended at Willmar, Brainerd, Winona, Austin and Albert Lea.

An address was given to the Iowa State Society meeting at Marshalltown in May, in relation to medical legislation as it obtains in Minnesota.

Aside from attending the reception tendered by the Mayo Clinic to Dr. E. Starr Judd, president-elect of the American Medical Association, the work has been of a routine nature.

PRESIDENT BOYER: The report of the Secretary is in the hands of the Reference Committee. We will hear that report later. We will proceed now with the report of the delegates to the American Medical Association.

DR. BRAASCH (Rochester): As I recall it, the delegates sort of divided the burden among themselves. I am supposed to give a résumé of the meeting of 1929 which was held in Portland. I will not detain you long with the report, as it is already a matter of past history.

DELEGATE'S REPORT OF PROCEEDINGS OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION DURING THE MEETING OF 1929

It is unfortunate that the best way we have at our command of informing the members of the Association as to the activities of the various officers and committees of the American Medical Association and as to the proceedings in the House of Delegates is through the annual report of the State delegate to the local House. It is true that these proceedings and committee reports are published in the Journal of the American Medical Association, but they are usually published in one or two issues, in fine print and placed in the back of the Journal, so that very few of the members take the time and trouble to read the rather voluminous reports. It would be much better if a synopsis of the more important activities were made, so written that it would appeal to the average member of our Association, and printed in a separate form such as in the Monthly Bulletin, which would insure a widespread circulation. It would obviously be for the best interests of our Association to create an intelligent opinion among its members. In this way only is it possible for the House of Delegates and the officers to obtain the best results in the conduct of its affairs.

As I said before, the inadequacy of a report of this kind is apparent. However, I will content myself with a brief summary of the more important activities, some of which I hope will make some appeal to you.

The meeting of last year, which was held in Portland, had an unusually small registration, the total being but 3,061, the largest number being from the western coast and the middle west. There were but 200 men registering from the east, showing how provincial the easterner really is and furthermore, how much farther it is from the Atlantic to the Pacific coast than it is from the Pacific to the Atlantic coast.

In his address President Thayer discussed a variety of subjects, including the work of the Council on Medical Education and Hospitals, and referred to the desirability of carrying on the work of the Index Catalog in the Surgeon General's Office. He also referred to the legislation which interfered with the preroga-

tives of the physician in regard to prescription writing and as a result aroused a controversy in the press between the clergy and himself. President Thayer, however, was supported in his stand, which was quite logical, by the House.

President-elect Harris in his address referred to the high cost of medical care and urged that the subject should receive the serious consideration of the medical profession; that the solution was in their hands rather than in the hands of the layman.

A resolution to the effect that expenses of the delegates be paid by the American Medical Association failed to pass.

Attention was called to the fact that there were a number of hospitals that were unethical in their methods of advertising and that some 400 hospitals have already been omitted from the list of accredited hospitals on account of such unethical practices.

Plans for increasing the size of the headquarters and enlarging the opportunities of the Association received favorable action.

It was proposed that all papers read before the Scientific Session of the Association be published, but the resolution was defeated.

A resolution favoring the establishment of a Home for Aged Physicians was defeated, because it was thought that it was more a matter for individual state societies to decide rather than the national organization.

The value of diagnostic clinics and clinical lectures in the program was emphasized.

The clause in the constitution referring to the Principles of Medical Ethics in Section 3, Art. VI, Chapter II, was altered so as to read as follows: "When a patient is referred by one physician to another for consultation or for treatment, whether the physician in charge accompanies the patient or not, it is unethical to give or to receive a commission by whatever term it may be called or under any guise or pretext whatsoever."

Doubtless you will recall that in the 1928 meeting you charged your delegates to call attention and to criticize the action of the Red Cross in authorizing its nurses to nurse for those other than regular practitioners. This was done and a vote of approval given.

The raising of the price of the Journal of the American Medical Association from $6 to $8 was authorized.

Four cities extended invitations to the American Medical Association as the next meeting place, namely Detroit, Philadelphia, Atlantic City and Memphis, Detroit being selected.

In order to obtain an adequate idea of the scope of the work which is being done by the various officers and committees of the Association it would be necessary to read detailed reports. Most important among them was that of the Board of Trustees. The scope of the work of this most important body is exceedingly wide and a perusal of the report would well repay one for the trouble.

In their report the Board of Trustees urged that the circulation of Hygeia be increased, and called attention to the fact that it is particularly applicable to the office table of most physicians. They called attention to the good work of the Women's Auxiliary in extending the circulation of Hygeia. They also mentioned the increase in the use of the Association library in the lending of periodicals.

Attention was called to the work of the Council on Pharmacy and Chemistry and it was stated that as a result of the untiring and unselfish service of those who compose the Council, the leading representatives of the American Pharmaceutical industry have relegated the drug mixture to the background, and by the employment of competent scientific staffs are doing an excellent work in the development of new and better drugs. From year to year appreciation of the Council's work has been increasing and today this body is recognized as an authority on drugs and drug therapy alike by the medical profession and by the pharmaceutical industry. It would seem that the reports of the Council on Pharmacy and Chemistry should have a wider circulation than at present. Few of us realize how many activities this Council is engaged in. Among the most interesting is the Therapeutic Research Committee, which has charge of subsidizing research problems in various lines of therapy. It is also true that intelligent investigation is carried on in the Chemical Laboratory. The work of the Council on Physical Therapy was also commented upon and commended.

No doubt few of us also realize the scope of the work of the Bureau of Investigation which answers thousands of letters of inquiry of various kinds during the year.

Probably the most interesting report from the Bureau of Legal Medicine and Legislation was that regarding the progress made in the matter of income taxes on the earnings of physicians. The attitude of the House of Delegates toward the Sheppard-Towner Maternity Act was reasserted as being inimical to its continuation. On the subject of Medical Defense it was stated that what was needed was organized effort by medical defense committees maintained by our state medical associations to prevent claims based on alleged malpractice from arising. This function of the medical defense committee seems to be more important than its function of assisting in the settlement of claims after they have arisen.

All of these committee reports and the various resolutions offered were referred to reference committees of the House of Delegates for their consideration and criticism. Voicing their approval or suggesting alteration, these reports were referred to the House for further consideration and approval. Every opportunity is given the members for expression of individual opinion. It is remarkable how the majority opinion is frequently registered with no uncertainty and usually with logical intelligence. The smoothness with which the large amount of business is taken care of is largely due to the good judgment and keen intelligence of the Speaker of the House, Doctor Warnshuis.

PRESIDENT BOYER: We would like to hear from Dr. Wright, another of the delegates.

DR. WRIGHT (Minneapolis): I don't like to take up

too much time. The thing, I think, that impresses you in the House of Delegates is the efficiency and speed with which things are transacted. The reports, as a rule, are very brief and very thorough and comprehensive. During the interim they thresh out these reports and anyone who wants to defend his report can do it there. But it is a very impressive legislative body, and it seems to me that there was more zip and energy and keenness exhibited in the House of Delegates in discussing our many problems than there ever was before.

One of the outstanding things we had to deal with was the question of the new legislation regarding veterans of the World War. Mr. Hoover wired for our opinion on the question, and he got it in a very convincing way. It shows how our Association has risen in the minds of those in the legislative halls when they will wire for our opinion. There is no question but what the Chicago office is on its toes. The outstanding thing, I think, this year was the new Economics Bureau. It was introduced by California organizing an Economics Committee to take up all these questions relating to the economy question of the profession and try to devise some solution, or at least to have some point of view in our attitude with the public on many of these questions. That was thoroughly discussed.

The question of the veterans' legislation, apparently no solution was offered and no method of solution could solve it. This question of constant expense and care of soldiers who have become ill since the war is a very serious matter. I was talking to some of the Congressmen at Washington and they said it is going to cost this country a hundred billion dollars to take care of them. One question which Congressman Andresen was very anxious for me to answer was this: Is it true that these men can not be taken care of as well by civil doctors in civil hospitals as they can in Government Hospitals and by Government doctors? He said, "Of course, I feel just as you do about it, that it is perfectly ridiculous to think that the Government can take care of these men better than they can be taken care of by you doctors in civil practice." This legislation will lead to the building of numerous hospitals, and they will have to do something later with the hospitals when the need for them has passed. Even if there are no veterans they can put someone else in them.

We suggested a committee to work with the Legal Defense Committee to try to coöperate and get their support in Washington by contact with local Congressmen and Senators. It is a well known fact that the local Congressmen will listen more to the local group if they are well organized than they will to any other group.

Of course, the outstanding thing that was done was the election of Dr. E. Starr Judd. He is a Minnesota man and was elected by his friends. A number of surgeons from all over the country came and used all kinds of pressure for Dr. Judd, and I think it was a very wonderful thing. I hoped Dr. Judd would be here this afternoon so that we might see him and have him presented to this body.

The meeting, of course, will be in Philadelphia next year. I think that is one of the things that is difficult for the men in the House of Delegates to determine. The different places go in and ask for meetings and we don't know just what the facilities are, because the men who know are not permitted to come in and state frankly just which place is the best. It would be a fine thing for Mr. Braun if someone could come in and say we know just which town is best equipped to take care of us in the best way. But of course we are not permitted to do that.

I think we would all welcome any questions about the meeting. I would like to second Dr. Braasch's advice that everyone read carefully the published transactions, and I think we ought to hear from Dr. Herman Johnson inasmuch as he has some subterranean method of acquiring information which the others of us do not possess, and I think he could probably give us some additional information. (Applause.)

PRESIDENT BOYER: I don't suppose anyone here ever heard of Dr. H. M. Johnson, commonly called Herman, but Herman, will you come here and give us a few words?

DR. JOHNSON (Dawson): I was one of the delegates to the American Medical Association at Detroit this year. It is a wonderful organization and is becoming more of a real organization all the time. You would hardly recognize the American Medical Association House of Delegates of 1930 as the same organization which met in Dallas when I first was a delegate. They worked hard then, but they work harder now. They do their best for the rank and file of the medical profession. And I want to tell you that some of the members of the House of Delegates are not afraid either. If they think they are right, they will fight for their beliefs. We have found that we have to do the same thing and we get along all right. The American Medical Association is certainly fortunate to have such men at the head of it as it has. I want to say that I don't believe anyone could fill the position of secretary as Dr. West has. We hope Dr. West will be well and strong and able to continue the work he has done so well in the past. In electing Dr. Judd as president, it was a case of the office seeking the man and not the man seeking the office. That is the only way anyone should be elected president.

One of our main troubles is social and state medicine. It is absolutely necessary that we stand by the American Medical Association in every way, because it is only by united action with them and through them that we can fight off state and social medicine. Delegates from the East said they were fighting with their backs to the wall and that if we didn't take the very best steps and go right after it, we would soon be in the same position as the medical profession is in Europe. We might not be able to stop it, but we can modify and direct it to a great degree. Let us continue our efforts along those lines. (Applause.)

PRESIDENT BOYER: You have heard the report of

the Delegates to the American Medical Association. What will you do with the report?

DR. SAVAGE (St. Paul): I move it be accepted, with an expression of appreciation for what they have done.

(This motion was carried.)

PRESIDENT BOYER: In the spring the conference on Hospitals, Medical Education and Licensure was held in Chicago. It is an annual affair. Dr. Braasch was present at this conference. We would like to have a report from Dr. Braasch covering this conference.

DR. BRAASCH (Rochester): I happened to be at a medical meeting in the East and stopped at this meeting on the way back.

REPORT OF ANNUAL CONGRESS OF MEDICAL EDUCATION, LICENSURE AND HOSPITALS

The annual congress of Medical Education, Licensure and Hospitals held in Chicago this year attracted several hundred men from far and wide who are interested in the problems involved. Many of the subjects discussed have reappeared perennially and their solution seems no nearer. In the course of time, however, and as a result of such discussions, many controversial points are cleared, giving room for progress. It is not alone the stimulation of ideas and the comparison of experiences which are of value in conferences of this kind. Probably of greater value are what may be called the by-products, namely the contact of individuals with common purposes and ideals, permitting discussion of major problems as well as allied subjects, devoid of the formality and embellishments of set papers. The value of these informal conversations is frequently worth expense and effort involved.

Aside from the three divisions stated on the program there were gatherings of representatives of many other interests and there were meetings other than those included in the program. Predominant in the attendance at many of the gatherings was a liberal representation of the nursing organization.

Probably the gathering which attracted the most attention was the Conference on Hospital Service and the Cost of Medical Care, on Tuesday, Dr. Harry E. Mott presiding. There were a number of excellent papers in this symposium, which aroused considerable interest in the subjects involved. Dr. Caldwell's contribution was more or less a defense of the present methods of conducting hospitals and of the expense involved, inferring that everything possible was being done under the circumstances to reduce the minimum. It was also his impression that the peak of hospital cost had been reached and would probably recede from now on. He made one claim which is worthy of consideration, namely that the cost of hospitalization to the indigent should not be borne entirely by the hospital, but should be shared in part by the community through taxation. He also called attention to the great value of the hospital as an educational factor, not alone to the medical profession, but to the public as well, and stated that the expense of this activity should not be borne by the hospitals alone.

This was followed by a paper by Dr. James B. Herrick, who discussed hospitals from the viewpoint of the medical staff and pointed out many ways in which the expense could be materially reduced. He suggested that members of the staff be continually on the lookout for means whereby economy could be practiced and that they consult freely with the hospital management in this regard. He felt that much saving could be brought about in the way of nursing; first in regard to group nursing, which he believed gave much economic promise for the benefit of the average patient. He thought that nursing service by the hour might also be applicable in many cases where it is not necessary to have constant attendance. He also stated that in many cases patients are unnecessarily placed in private rooms and would be just as well off, if not better, in wards. While he did not decry the college degree for a nurse, he did not think this was always necessary, but that this type of nurse should be given special duties and responsibilities.

Dr. Herrick felt that hospitalization was unnecessary for examination of patients in most instances. This practice is followed quite freely, largely because it is a matter of convenience to the physician, and also because the expense of this examination, in the minds of many patients, reflects the excellence and thoroughness of the examination. He thought that a flat laboratory charge was frequently unnecessary, and that the laboratory charge should be graded according to the patient's means. He felt that many mistakes were made in hospital construction, which were anything but economic; that with the proper planning and care the cost of construction could be materially reduced.

It was also felt that there should be various types of hospitals, according to the patient's pocket-book, much the same as our hotels. In other words, the hospital should be constructed for convenience, comfort and luxury to fit the patient's pocket-book. A hospital might well be equipped to take care of the ordinary wants of a patient and yet be constructed much more cheaply than one where every luxury was present, as in some of the modern hospitals. In this way the patient's means could be better accommodated. Dr. Herrick also made the remark that he thought the modern hospital today was too standardized and had too many rules. He feels that they should be more elastic and more human in their attitude toward patients.

Dr. Arthur T. Holbrook continued the discussion in a most excellent paper entitled "From the Point of View of the General Practitioner." Dr. Holbrook stated that he was proud to be known as a general practitioner and believed that the pendulum was rapidly swinging back and that the fundamental value of the general practitioner in society was being recognized. He stated that the position and the value of the specialist was over-emphasized; that in the hands of a progressive, up-to-date general practitioner only 10 per cent of patients needed hospital care and that a diagnosis could be made in at least 80 per cent of his patients without any consultation with a specialist. He stated that the art of medical practice was illogically subordinated to the science of medicine; that many patients were unquestionably being hospitalized unnec-

essarily, largely for the convenience of the examining physician, which means unnecessary expense to the patient. By a general practitioner he meant one who has kept abreast with knowledge, investigation and treatment, who after a careful general examination acts as a medical advisor and not necessarily a vendor of drugs. It was his opinion that the average group clinic did not solve the problem of the cost of medical care, but that there was a tendency to do unnecessary examinations in such a group.

Dr. Reynolds, in a paper entitled "From the Standpoint of the Layman," called attention to the uneven distribution of hospitals, saying that the laity should be educated as to the actual cost of care and that if they were there would be less criticism. He believes that the science of healing is making great strides, but that the business of healing lags behind. He thought that the budgeting of medical costs by the layman and paying for the same on the installment plan, as for furniture, might be of value. He stated that the problem centered itself around the cost of care for the middle class patient and that it is the other expenses and extravagances that are a large factor.

Dr. Billings in discussion suggested that hospitals for convalescents might be constructed at a considerable reduction in cost. Instead of paying $5,000 for a bed, such hospitals might be constructed at a cost of $1,000 for a bed, and the rates might be as low as $2 per day. Such hospitals as that could take care of ten or fifteen per cent of the patients in hospitals today. It is Dr. Billings' opinion that physical examinations forty years ago were more accurate than they are today and he states that too much depends upon fine laboratory methods for diagnosis, ignoring ordinary methods which would be sufficient in the large majority of cases.

Mr. Gregory, Manager of the Palmer House, was called upon to make some practical remarks from the viewpoint of the hotel man. It was his opinion that feeding patients in the hospital was not a medical man's business, but that of a hotel man or administrator. He thought that the mental attitude of the patient would be greatly improved if the rooms had more of the atmosphere of the hotel than the hospital, and that an effort could be made to make the patient more comfortable and in a happier frame of mind without increasing the cost.

On Tuesday afternoon I attended the meeting of the Federation of State Medical Boards and Medical Licensure, together with Dr. Sanderson, Secretary of the Medical Examining Board of our own State, and Mr. Brist. We went there with the expectation of listening to a criticism of the Basic Science law and the Basic Science boards, and came prepared to defend them if necessary. However, in none of the papers were there any direct accusations made against the Basic Science examinations, although in several of the papers there was veiled criticism and insinuation. It was quite evident that the "Ancient Order of State Examiners" were not in sympathy with the new order of things. The most that was said in opposition, however, was that the Basic Science Board and the Medical Examining Board had not reciprocated in the various states as they should. Dr. W. L. Bierring called attention to this fact and I think his point was well taken. However, in the discussion of the various papers, several of the Medical Examiners gave vent to criticism and vituperation of the Basic Science Act and questioned its efficacy. Although Mr. Brist arose to defend the Basic Science Act in Minnesota, his remarks were not taken with particularly good grace, and he was not given much of an opportunity to display his wares. In the executive session which followed the open meeting, however, no resolutions were passed which were inimical to the Basic Science Boards.

One left with the impression that the average medical examiner was not in sympathy with the Basic Science methods of controlling irregular practitioners, apparently feeling that his prerogatives were invaded.

There is no doubt about the efficacy of the Basic Science Board in the minds of medical men in states where it has been tried out, and it would be safe to assume that in the course of time its value will be recognized by all.

I also attended the Symposia on the full time system of teaching and on the importance of pathology in medicine. Excerpts of the proceedings of these sections have been published in the Journal of the American Medical Association, and I will refer anyone who may be interested to these.

Suffice it to say that a congress of this kind, embracing the various topics involving the progress of modern medicine, is most interesting and stimulating, and if anyone can spare the time to attend these mid-winter conferences, he will be well repaid for his effort.

WILLIAM F. BRAASCH, M.D.

A motion was made, seconded and carried that the report of Dr. Braasch be accepted.

PRESIDENT BOYER: We are now ready for the report of the Reference Committee. Allow me to state that a different procedure has been adopted than has obtained heretofore. The Reference Committee has been requested to submit a summary of each report with recommendations. Following the report and recommendations by the Reference Committee upon each one of the committees whose work it surveys the discussion will be opened by the chairman of the committee whose work is reported upon. The purpose of this is to facilitate the work of the House of Delegates. Everybody has had a copy of all these committee reports. It is requested that the discussions be to the point and be brief. Dr. Manley, of the Reference Committee, will now be heard from.

DR. MANLEY (Duluth): You have all had a chance to read the Secretary's report. The Reference Committee recommends the careful reading of every word of the report of the Secretary. It gives a comprehensive, bird's-eye view of the activities of the Society during the past year. We also recommend the careful perusal of the addenda to the Secretary's report in the form of a letter from Councilor Savage.

REPORT OF THE SECRETARY

The activities of the secretary's office are widely varied and are increasing as our organization develops. At the present time eight committees not listed in the Constitution are operating. These special committees demand information, notices of meetings, and reports for compilation, all supplied by this office.

An increasing number of requests for information and service in the field of economics and private practice are constantly received.

The secretary's office has assisted several component medical societies, both individual members and committees, in constructing surveys relative to the programs and medical economic conditions in other state societies. This has entailed considerable correspondence and compilation of returns.

The weekly newspaper service to Minnesota newspapers has been continued and a plan developed for it whereby the stories are written in our own office. Thus we are eliminating the purchasing of this service from the State Medical Society of Wisconsin.

Letters to the Consultation Bureau now average five or six a week. These letters are acknowledged in this office and referred to Dr. O'Brien for reply.

Almost daily we receive letters from the medical profession informing us of violations of the Basic Science and Medical Practice Acts. These communications usually require a reply or further investigation. Then they are sent to the State Board of Medical Examiners and frequently to the American Medical Association. This service has become an important part of the routine work of the secretary.

Bookings for Mr. F. Manley Brist, Investigating Attorney for the Minnesota State Board of Medical Examiners, are made through the secretary's office. Since the last Annual Meeting, Mr. Brist has talked to the following groups:

May 2, 1929—Wright County Medical Society, Maple Lake.

May 6, 1929—Hennepin County Medical Society, Minneapolis.

May 14, 1929—Women's Auxiliary, Annual Meeting, Minneapolis.

May 21, 1929—Steele County Medical Society, Owatonna.

May 21, 1929—Lions Club, Owatonna.

May 22, 1929—Redwood-Brown County Medical Society, New Ulm.

Sept. 10, 1929—Washington County Medical Society, Stillwater.

Sept. 19, 1929—Kiwanis Club, Tracy.

Sept. 19, 1929—Lyon-Lincoln County Medical Society, Tracy.

Oct. 14, 1929—Camp Release District Medical Society and Ladies Auxiliary, Montevideo.

Nov. 5, 1929—Southwestern Minnesota Medical Society, Slayton.

Nov. 25, 1929—Blue Earth County Medical Society, Mankato.

Nov. 26, 1929—Stearns-Benton County Medical Society, St. Cloud.

Jan. 11, 1930—Secretaries' Conference, St. Paul.

Jan. 23, 1930—Joint meeting of the Lions and Kiwanis Clubs, Mankato.

March 25, 1930—Lions Club, Stillwater.

March 26, 1930—Women's Auxiliary, Hennepin County Medical Society, Minneapolis.

April 22, 1930—Colloquium lecture, Winona.

May 1, 1930—Semi-annual meeting of Blue Earth Valley Medical Society, Fairmont.

May 13, 1930—Mower County Medical Society, Austin.

May 14, 1930—Iowa State Medical Society, Marshalltown, Iowa.

May 15, 1930—Freeborn County Medical Society, Albert Lea.

May 23, 1930—Colloquium meeting, Wadena.

June 24, 1930—Kiwanis Club, Willmar.

June 24, 1930—Kandiyohi-Swift County Medical Society, Willmar.

July 10, 1930—Wabasha County Medical Society, Wabasha.

The contact with the Minnesota Public Health Association has continued in the same manner as it has in the past years, the relation being a close and valuable one for the purpose of reaching the laity especially in the organization of groups and schools. We regret to say that there are still three counties who have independent seals and who are not coöperating with us in our program. They are McLeod, Blue Earth, and Martin counties.

The following is from a clipping in the Minneapolis Journal of about June 23, 1930:

> Papers for incorporation of the Citizens State Health Association have been filed with Secretary of State Mike Holm by a number of lay and professional citizens as a group to promote "the health of people by natural or drugless means, to cooperate with similar organizations for investigation or promoting of health projects submitted by health agencies in the interest of public health, and to distribute health information by way of literature, publications, health lectures and clinics." Officers are Gustav H. Nybeck, president; Mrs. A. C. McBeath, first vice president; Winifred M. Brachlow, second vice president; Mildred M. Skiff, secretary and treasurer, and C. W. Whittenberg, Fred J. Grande and W. J. Hyman, board of directors.

It is evident that cultists are preparing for the next session of the Legislature and expect to use this agency as a "camouflage" to put across propaganda, hoping to influence legislation.

"Everybody's Health," the popular monthly magazine published by the Minnesota Public Health Association, is a valuable medium with which to disseminate the truth about health. There is so much health misinformation put out by faddists, quacks, and commercial groups that "Everybody's Health" makes a convenient medium to promulgate the truth. This magazine goes into every school in the State of Minnesota and most of the hospitals and to many thousands of lay subscribers. It should be in the reception room of every physician's office and merits the endorsement of all who are interested in the practice of medicine and the health of our people.

The secretary's office has conducted a large part of

the program of the Committee on Public Health Education, especially correspondence and booking of speakers, as well as the newspaper service.

Dr. George Earl, Chairman of the Public Health Education Committee, agreed to give two weeks of his vacation again this year to assist in a state-wide tour for the purpose of fostering good will and better organization among members of the medical profession and also a better attitude on the part of the general public. In every community visited, a meeting of the medical profession was held, including members from the surrounding country, frequently from several counties. This health tour was conducted with the cooperation of the Minnesota Public Health Associations, school superintendents, and various local Parents-Teachers Associations, in the towns of Alexandria, Bemidji, Crookston, Fergus Falls, Marshall, Montevideo, Moorhead, Wadena, and Worthington.

Wednesday, October 30, represented a typical day's program of the tour. It consisted of the following: tuberculosis short course at the tuberculosis sanatorium; health talks at the two teachers' colleges and the high school; a medical economics meeting; a public meeting; a meeting for social workers; and a big health "jamboree" in the evening. There was a large and enthusiastic attendance at all of these meetings.

The secretary attended two programs in each city, except Brainerd, of the series of Colloquium lectures this spring. These were the programs devoted to the Minnesota State Medical Association and the Minnesota Public Health Association.

The Colloquium short courses were sponsored by the Committee on Hospitals and Medical Education of the state association coöperating with the Extension Division of the University of Minnesota. They provided one program each week for eight weeks, covering tuberculosis, heart, obstetrics, hospital management, immunology, cancer, and cultural subjects at an expense of only $50 to the local society. Five cities, Wadena, Faribault, Willmar, Winona, and Brainerd, booked them. A large attendance and much enthusiasm marked the series in each city. The secretary believes that better feeling and better organization among the medical profession are among the outstanding by-products of these courses. It is hoped that something along the same lines can be given again this fall.

The secretary made several long tours of the state, including the towns of Albert Lea, Austin, Bagley, Brainerd, Caledonia, Crookston, Faribault, Hawley, Jackson, Lake City, Lake Park, Litchfield, Mankato, Moorhead, New Ulm, Owatonna, Red Wing, Rochester, Saint Cloud, Saint Peter, Sleepy Eye, Spring Grove, Tracy, Wabasha, Wadena, Walnut Grove, Waseca, Willmar, Windom and Winona, to stimulate interest in the Health Tour and the Colloquium lectures as well as participating in the tours and lectures themselves. He attended meetings of Stearns-Benton County, Camp Release District, Rice County, Freeborn County, and Mower County Medical Societies, and of the Northern Minnesota Medical Association; addressed a large number of medical and health groups throughout the state, such as the Lions Club of Stillwater, the Federated Clubs of Jackson, the graduation class of Naeve Hospital, Albert Lea, the Regional Nurses Conference at Austin; attended meetings of the American Medical Association, the State Secretaries' Conference of the A. M. A., the American Public Health Association, the State Board of Control Social Conference, committees arranging the Interstate Post Graduate Assembly, and the Iowa State Medical Association; made several trips to Duluth to confer with the President and the local committees in arranging the Annual Meeting; and held innumerable smaller conferences in Saint Paul and Minneapolis on matters that relate to the business of the Minnesota State Medical Association, namely, meeting of the Executive Committee of the Hennepin County Medical Society, meetings of the Committee on Scientific Assembly, regular meetings of the Council.

The secretary wishes to extend his personal appreciation for the splendid coöperation received from those who accompanied him to the various gatherings of the medical profession throughout the state. In particular he wishes to thank Dr. S. H. Boyer, Dr. R. M. Burns, Dr. George Earl, Dr. E. J. Engberg, Dr. J. M. Hayes, Dr. M. S. Henderson, Dr. N. O. Pearce, Dr. F. J. Savage, Dr. Theodore Sweetser, Dr. W. W. Will, Dr. C. B. Wright, Dr. J. A. Myers, Dr. Leo G. Rigler, Dr. Walter H. Ude, Dr. F. F. Callahan.

Dr. F. J. Savage and the secretary attended the medical meeting at Hastings at which a resolution petitioning the House of Delegates for organization of a Dakota County Medical Society was drawn up. With the organization of this society, only one county, Lake of the Woods, in the entire state of Minnesota will remain unorganized or unaffiliated with some county organization.

The ever enlarging attendance at county meetings of the medical profession is doing much toward making a stronger organization for our state, we believe. We are willing to arrange programs and aid in securing speakers for any county medical society. News items and notes of meetings from county societies are welcome. They cement our organization. We want to feel that the county societies are part of us and that this is their office. We hope they will call on us.

Two fruitful state meetings were held in the Twin Cities during the year. One was Dr. Boyer's meeting of committee chairmen, held in Minneapolis in connection with the meeting of the American College of Physicians in that city, an unusual and effective gesture toward coöperation and centralization.

The other was the annual secretaries' conference held in Saint Paul, January 11. Thirty societies throughout the state were represented at this conference. Officers of the state association and many other members were present. The important problem of what to do about inflammable *x*-ray films was discussed by experts from the Eastman Kodak Company, from the fire department, and from the medical profession, and discovered to be no problem. It was clearly indicated that the acetate film, which is no more dangerous to have around than so much paper, can be used just as effectively as the dangerous nitro-cellulose variety now,

and no more expensively either, if you consider the expensive and elaborate filing systems with their fresh air vents and sprinklers that are necessary to proper protection of the nitro-cellulose film.

Outdoor storage vaults were recommended for such of the old inflammable films as it is necessary to keep for teaching, clinical, or legal purposes.

The fundamental and practical character of the American Heart Association's program as indicated by Dr. I. C. Riggin, executive secretary, New York, recommended itself to the conference. Scientific research, evolution of a standard nomenclature to aid in diagnosis, and sundry suggestions as to care and rehabilitation of convalescent cardiacs were embodied in it.

These were two important and interesting items on this program which proved to be one of the most valuable ever held by the association. Reports from local societies and meetings of important committees occupied more than the day allotted to the conference and demonstrated again the value of these secretaries' meetings to the closer organization and more efficient cooperation among the medical profession in this state.

Your secretary was impressed on his attending the American Medical Association meeting at the amount of organization that has taken place in the medical profession in the past few years throughout this country. I had the privilege of being the only state secretary who was invited to attend a meeting, which began at 12 o'clock noon and lasted until midnight, of local full-time secretaries. All these were laymen with the exception of one from Brooklyn. Such cities as Detroit, Brooklyn, Milwaukee, Saint Louis, Cincinnati, Toledo, Chicago, Des Moines, and others were represented. It is gratifying to know that so many large centers have made definite progress in organizing the profession into strong units.

The problems that have confronted these locals in recent years have been met by them in very much the same manner as they have been met here. Strong committes are working in these organizations. Mr. Burns, who will speak at the medical economics meeting, will give an outline of what these locals are doing and what the functions of the lay secretary are.

We are interested to note that the House of Delegates of the American Medical Association passed a resolution introduced by the Minnesota delegation which provided for a committee of five to investigate national legislation and make a report to the House of Delegates and the Board of Trustees.

Another resolution was passed creating a Board of Medical Economics in the American Medical Association. This resolution came from California.

The universal acclamation with which these two resolutions were received indicates that the profession throughout the United States realizes the problems that are before them.

Report from attorneys, Oppenheimer, Dickson, Hodgson, Brown, and Donnelly:

"ANNA ANDERSON vs. DR. HENRY L. ULRICH of Minneapolis. Case pending. Not on the calendar of Hennepin County for trial. Undoubtedly will never be brought to life.

"DR. F. D. GRAY, of Granite Falls, Minnesota, vs. GEORGE GRIGER. No developments.

"DORA HALTER vs. DR. WILLIAM E. BROWNING of Caledonia, Minnesota. Case disposed of by the death of Dr. Browning. A dismissal was subsequently filed in Court."

At present, membership by societies of the state association, as compared with December 31, 1929, is as follows:

	Dec. 31, 1929	July 2, 1930	Affiliate	Association	Total
Blue Earth County	31	30	1		31
Blue Earth Valley	22	23	5		28
Camp Release Dist.	43	42	1		43
Central Minn. Dist.	14	13			13
Chisago-Pine County	14	17			17
Clay-Becker County	17	15	1		16
Dodge County	6	6			6
Freeborn County	17	18			18
Goodhue County	14	14			14
Hennepin County	508	516	22	7	545
Houston-Fillmore	20	21	1		22
Kandiyohi-Swift	22	21			21
Lyon-Lincoln	18	18	1		19
McLeod County	13	12			12
Meeker County	8	8			8
Mower County	23	22	1		23
Nicollet-LeSueur	17	19			19
Olmsted County	314	314		1	315
Park Region Dist.	39	36			36
Ramsey County	297	286	14		300
Red River Valley	57	53			53
Redwood-Brown County	31	28	3		31
Rice County	30	31	2		33
St. Louis County	181	171	4		175
Scott-Carver County	24	24	1		25
Southwestern Minnesota	48	52	2		54
Stearns-Benton County	37	42	4		46
Steele County	10	9			9
Upper Mississippi	73	63			63
Wabasha County	11	10	2		12
Waseca County	11	9			9
Washington County	14	13			13
Watonwan County	7	7			7
West Central Minn.	23	26			26
Winona County	23	24			24
Wright County	16	14			14
TOTALS	2,053	2,027	65	8	2,100

The growth of your program has been rather rapid and expansive. There is enough experience at hand now to consider the advisability of curtailing the factors of least importance. The administrative expense has been unusually low due to the interest of those participating in the program and increased administrative expenditures will be necessary immediately.

The success of a central office in rendering real and lasting service to the society must depend upon proper guidance from state officers and committees and the

loyal efficient coöperation of the component units with the state organization.

E. A. MEYERDING.

ADDENDA TO THE SECRETARY'S REPORT

The following letter written by Councilor F. J. Savage to the members of the Ramsey County Medical Society contains so much of value that it was thought advisable to include it in the Secretary's Report so that all the members of the Minnesota State Medical Association would be familiar with its contents.

To the Members of the Ramsey County Medical Society:
Dear Doctor:

At the April meeting—the 28th—the question of the dues of the State Medical Association will come up for discussion.

The fundamental question is not so much that we are spending $15.00 per year for support of the State Association but are we getting results from this expenditure sufficient to justify this amount? So many statements are made without foundation that a consideration of the various phases of State Association activities is desirable.

Since the statement has been made that membership in the state and county societies has fallen off since our dues advanced in 1927 to $15.00, let us review the membership from 1926 to date of both the State Association and the County Society:

Year	Total No. of M.D.'s registered in State	State Society including Affiliate members	Ramsey County including Affiliate
1926		2,134	327
1927		2,065	326
1928	3,341	2,126	332
1929	3,347	2,189	325

These figures speak for themselves.

The effect of the Basic Science Law on admission of chiropractors to practice in the State has been that from 1922 through 1927 there was an average of 38 per year. Since the passage of the Basic Science Law they have averaged one per year.

Since the passage of the revised Medical Practice Act, the attorney for the Board of Medical Examiners reports on two years' work as follows:

98 cases investigated
27 cases in court
23 convictions
2 dismissals
2 not guilty

and in addition 16 have left the state and one has quit entirely.

This work has been possible because of the revision of our Medical Practice Act due to the work of the Committee on Legislation of the State Association.

Without our Legislative Committee the chiropractors would have reduced their study from 24 to 18 months. Osteopaths and chiropractors would be practicing in our tax supported hospitals. An anti-vaccination bill would be in force. An anti-vivisection law would be in force. Naturopaths would be legally licensed to treat the sick in Minnesota. Full time University and state asylum physicians would be prohibited from accepting fees for any private work. Malpractice suits could be started within a six year period from the time the alleged malpractice occurred. It is a well known fact that in the time when the period was six years, instead of two years, that the majority of suits were started after the two year period. If the law had not been changed it is probable that our malpractice insurance would now be costing double what it does. The difference would be a greater sum than our annual dues of $15.00 to the State Association. In addition note the Ramsey County report for 1929. Not one malpractice suit filed against a member during the past year. An attempt was made at the 1929 session of the Legislature to go back to the six year period but this was defeated.

Before your Legislative Committee had money with which to work (in 1923), the osteopath was granted the right to practice minor surgary, administer anesthetics, narcotics and antidotes. In 1929 a bill granting still more legal rights was defeated.

In 1929 the venereal disease laboratory of the State Board of Health at the University was continued in operation largely through the efforts of the Legislative Committee.

In 1927 the Committee aided in securing an appropriation of $25,000 for research work at the University.

If it were not for your Legislative Committee, your fees for work done under the Workman's Compensation Law would now be dictated to you by the State Industrial Commission.

The atmosphere created by the Legislative Committee made easy the passage of the bill giving legal status to the staff of the Ancker Hospital and accounts for its present organization.

The passage of the Massage Bill at the 1929 session was done in the face of almost insuperable obstacles. This has far greater significance than the majority of medical men in Minnesota realize. Under the old Massage Law nearly every irregular who wanted to treat the sick could get a massage license and then assumed the title of Doctor. The result of two years of the operation of the law was deplorable. During the first eighteen months the old Massage Board licensed 269 to practice. Today there are 209 licensed masseurs in Minnesota. The new law places the licensure in the hands of the State Board of Medical Examiners and prohibits their use of the title of Doctor. We never had any quarrel with legitimate masseurs.

The Legislative Committee of the State Association has done this work for the people of the State of Minnesota and the members of the profession. The Council of the State Association has the utmost confidence in the expending of this fund by the Legislative Committee—however, the Chairman of the Legislative Committee has always insisted that members of the Council audit and inspect the accounts and such an audit and inspection has always been so conducted.

The activities of the Committee on Public Health Education are so many and varied that a brief description is impossible. Within the past ten years medical men throughout this country have awakened to the

necessity of maintaining contact with the public and we believe that the work of this Committee through the channels of the press, the radio, the distribution of literature and the lecture platform ranks well to the front among the states of the Union.

Your State Association has, as a Reserve Fund in securities, handled by the First Minneapolis Trust Company a total amount of $22,500.00. This money cannot be expended except for investment and re-investment without a vote of the Council. The beginnings of this sum go back to the time that Dr. Hill of Minneapolis was treasurer and represent careful savings over a long period of years. We don't know what this will ultimately be used for. When it increases to a sufficient sum the House of Delegates may instruct the Council to use the interest for the support of some physicians who have reached a helpless old age and have nothing of their own. The existence of this fund needs no defense. Criticism of the existence of this fund is almost beyond comprehension.

The Medical Society of the State of New York has annual dues of $10.00 per member but with 11,960 members this amounts to $119,600 annually. The osteopaths of Minnesota assess their members $20.00 per year, the chiropractors $15.00 per year, and the naturopaths, who have struggled for the past three legislative sessions for legal recognition, have dues of $200.00 per year. In Toledo the physicians pay $35.00 per year, in San Francisco $50.00, Brooklyn $35.00, Atlanta $25.00, Detroit $30.00, Fort Worth $25.00, Kansas City, $25.00, Portland $25.00, Richmond, Va., $25,00, and St. Louis $30.00.

We are faced with the question of whether or not we shall maintain an aggressive front in guiding legislation vital to the public and our interests and in the matter of public health education and in other fields of activity by maintaining our dues as they are; or shall we retrogress, stop our contact with the public, let every quack flood the Legislature with cult legislation, and try to forget that by virtue of our training in a special field we have a duty to the public in matters of public health.

Sincerely yours,
F. J. SAVAGE, M.D.,
Councilor, Fifth District.

A motion was made and carried that the report be adopted as read.

PRESIDENT BOYER: The report is adopted, and is now open for discussion.

In connection with the relief for veterans of the World War, I don't think the American Medical Association House of Delegates took any action on this. Some man got up and offered this solution to the problem: He said, "Issue to these veterans a policy similar to a sick and accident policy and let them do what they do when they have an accident in civil life. Have a regular family physician and a regular hospital and make a claim to the Government." That seemed to me to be very feasible. I don't remember any action being taken on it.

DR. MANLEY: The next is the report of the Treasurer. Without going into details, the receipts as given are $39,527.66; expenditures in 1929, $38,234.19; balance December 31, 1929, $1,293.47.

PRESIDENT BOYER: Dr. Schulze, will you please read your report.

TREASURER'S REPORT, YEAR 1929

In re: Treasurer's Statement year ending Dec. 31, 1928

Item-checks outstanding December 31, 1928		$2,490.29
Checks outstanding our books Dec. 31, 1928		
	$2,016.27	
	$2,016.27	
Checks outstanding Treasurer's Books Dec. 31, 1928		
$2,490.29		
1,000.00	(No. 68, January check)	
$1,490.29	(No. 71 to No. 75	
525.98	December checks entered in January)	
$2,016.27		
December receipts deposited in January amounting to	$375.00	
Bank Balance Dec. 31, 1928	$6,018.36	
Checks outstanding Dec. 31, 1928	2,016.27	
	$4,002.09	
December checks deposited in Jan.	375.00	
Treasurer's Funds as per our books Dec. 31, 1928	$4,377.09	

RECEIPTS

Balance on hand Dec. 31, 1928		$4,377.09
Membership dues—		
January	$15,525.00	
February	11,595.00	
March	1,440.00	
April	526.00	
May	450.00	
June	120.00	
July	90.00	
August	285.00	
September	126.00	
October	48.75	
November	45.00	
December	525.00	
		$30,775.75
Interest checking fund		116.96
Interest savings fund $10,000.00 at 4% 6 mos.	$200.00	
Interest savings fund $2,500.00 at 4% 3 mos.	25.00	
		225.00
MINNESOTA MEDICINE Subscription		4.00
MINNESOTA MEDICINE 1928 profits		916.11
Refund from Public Health Education Committee	$3.00	
	1.25	
	25.00	
		29.25

Annual Meeting Minnesota Alumni Association Luncheon		115.50
Annual Meeting Minnesota Alumni Association Luncheon paid direct		3.00
Borrowed—Nov. 30, 1929 $1,000.00 —$10.00 Int.	990.00	
Borrowed—Dec. 31, 1929 $2,000.00 —$25.00 Int.	1,975.00	2,965.00
		$39,527.66
Expenditures—1929		38,234.19
Balance December 31, 1929		$1,293.47

CASH DISBURSEMENTS

A. M. A. Delegates	$397.52
Annual Meeting	2,039.61
Auxiliary	76.78
Committee on Contract Practice	12.90
Council	187.46
Education	18,361.52
Furniture and Fixtures	44.00
Historical Committee	152.64
Hospital and Medical Education Committee	333.75
Legal	832.98
MINNESOTA MEDICINE	4,110.50
Miscellaneous	967.51
Miscellaneous Printed Matter	187.87
Public Health Education Committee	4,304.15
Rent	300.00
Secretaries' Conference	501.31
Secretary's Salary	3,000.00
Secretary's Traveling Expenses	338.39
State Health Relations Committee	126.21
Stenographers and Clerks	1,783.09
Notes Payable	.....
Treasurer's Salary	100.00
Refunds to Local Societies	76.00
	$38,234.19

CHECKS OUTSTANDING DECEMBER 31, 1929

Minnesota Public Health Association, No. 234	$361.35
Wm. B. Joyce & Co., No. 235	12.50
H. M. Workman, No. 236	35.95
Pollock's Clipping Bureau, No. 237	15.95
Fred L. Holmes, No. 238	50.00
A. G. Schulze, No. 239	80.00
Minnesota Public Health Association, No. 240	240.00
Bruce Publishing Company, No. 243	106.00
Wm. A. O'Brien, No. 246	180.00
	$1,081.75
Balance as per books December 31, 1929	1,293.47
Balance as per bank December 31, 1929	$2,375.22

A. G. SCHULZE, M.D., *Treasurer.*

DR. MANLEY: We recommend the adoption of the report.

PRESIDENT BOYER: I wish to state that the report has been studied in detail by the Council. Is there any discussion of the report? If not those in favor of the motion will so signify.

Motion to accept the report was carried.

DR. MANLEY: Next is the report of the Committee on Public Health Education.

REPORT OF THE COMMITTEE ON PUBLIC HEALTH EDUCATION

To Members of the House of Delegates:

The Medical Profession should have a definite policy in regard to its relation to the public. No one is better qualified than the graduate licensed medical man to direct the public in health matters. Any progress in the end will be largely dependent on the attitude, scientific ability and coöperation of the two thousand individual members of the State Association in solving the public health and economic problems. The public is interested in the care and cost of being sick. The medical man is facing a rapidly changing set of circumstances as regard his practice.

This committee was primarily organized to assist in creating public opinion favorable to scientific health legislation. While medicine has a scientific side it also has economic problems and the two never have been and cannot now be separated. Many organizations except that of the medical men themselves have been busy for years in directing medical practice, as evidenced by lay public health associations such as tuberculosis associations, the cancer group, child welfare, the endowed foundations such as the Milbank Memorial Fund with its millions and the Chicago Institute that was so much in the public eye a year ago. Tax supported agencies, federal, state, county, and city, are taking increasingly active interest in public health. The above agencies and organizations are no doubt sincere in their purposes even though medical men have not always been in accord with their policies. Then we come to those organizations that are distinctly questionable as represented by the cultists, fake health magazines, anti-vaccinationists, and what not.

The committee, having limited funds and no experience, spent its first year largely in an analysis of the situation, conferring with lay experts and securing criticisms and cross sections of opinion from members of the State Association as to policies and methods to be pursued. It was not until after having interviewed in small group meetings a considerable cross section through the state that definite plans were set in action.

By 1930 the following activities were taking place:

Hygeia and *Everybody's Health* sent to members of the Legislature so that they may be properly informed on matters of health.

Radio talks have been given weekly over WCCO. These are financed by the Committee.

Speakers Library.—Folders on 263 subjects are on file and upon request material is sent to members of the Association.

Speakers Bureau has not been extensively developed because of the expense involved in sending out speakers.

Meetings.—During the year a two weeks Health Tour was put on with the coöperation of the Minnesota Public Health Association, various local Parents-Teachers Associations, and school superintendents. Public Health and Medical Economics meetings were held at

Wadena, Moorhead, Crookston, Bemidji, Worthington, Alexandria, Marshall, Montevideo, and Fergus Falls.

Minnesota Public Health Association and its eighty-seven county public health associations, through them the tuberculosis sanatoria and with them contact with the Parents-Teachers Associations, and the Women's Federated Clubs, and numerous school systems, have been advantageous to use in putting across our part of the Public Health Education Program. The joint secretaryship of Dr. Meyerding makes it possible for the Minnesota State Medical Association to put on programs that are comparable to those put on by other medical associations and obtain results that would otherwise be impossible.

Stenographic Help.—This committee is charged with the services of a full time stenographer, a part of whose time has been given to the work of other committees having no budget, thereby correlating the work of some of these committees whose interests touch on the matters of our relations with the public.

Minnesota Medicine.—A page each month in this journal is devoted to the activities of the Committee; it is an open forum and acts as a clearing house for many of the problems studied by the committee.

Diphtheria Prevention Campaign.—The attention of the profession has been repeatedly called to this campaign with the suggestion that they prepare themselves to follow out the plan of immunizing every child between the ages of six months and eighteen months. The Minnesota Department of Health has sent to all the physicians of the state literature and posters. This fall the Committee in conjunction with the Minnesota Public Health Association will send out a poster.

Newspaper Service.—A weekly health story was mailed to 270 newspapers in Minnesota. The stories are now being written in the secretary's office.

Mr. Brist.—One of the most effective educational activities has been the sending of Mr. F. Manley Brist, Investigating Attorney for the Minnesota State Board of Medical Examiners, before medical and lay groups. During the year he has appeared before 16 county societies, before various luncheon clubs, the Women's Auxiliary. In Mr. Brist and his talks we have a striking example of the results accomplished by the program of the Minnesota State Medical Association during the past years. Mr. Brist brings before these groups the direct accomplishments of the new Medical Practice Act and the Basic Science Law. The Committee on Public Health Education finances this part of the program.

Central Health Council.—This is an important but difficult liaison that should function to secure more intelligent public health activities, but has not yet been well organized in Minnesota.

Public Health Nurses.—The committee has coöperated with the Committee to Study Public Health Nursing Problems. Conferences were held to bring about closer coöperation between the Public Health Nurses and the medical profession and to make it possible for the Public Health Nurses to accept the viewpoints of the medical profession in regard to Public Health.

Coöperation with the Committee on the Cost of Medical Care.

Coöperation with the Women's Auxiliary and participation in its program.

Minnesota State Fair.—About three years ago the Minnesota State Fair Board abolished health meetings and health exhibits at the Minnesota State Fair. These exhibits were placed without expense to the Fair Board by various organizations interested in Public Health. The Board, however, did furnish exhibiting space. Some of the organizations participating in this exhibit were: Medical School, University of Minnesota, Minnesota State Medical Association, Minnesota Dental Association, Hennepin County Tuberculosis Association, Minnesota Nurses Association, Minnesota Public Health Association, Ramsey County Public Health Association, and Minnesota Department of Health. The Committee recommends that a resolution be sent to the State Fair Board asking it to consider the possibility of re-establishing the Public Health Building. Health Education is essential to the welfare of the people in Minnesota and we feel that we should make an effort to bring about again this plan that proved successful several years ago.

The committee has advocated the adoption of the Hennepin County Medical Society's plan of coöperation with lay health organizations and has urged every county society to adopt this plan of having medical men on the Boards of Directors of all lay health organizations in their county.

Throughout the three years of activities there has been an effort made by the committee to enlist the criticism and support of every member of the State Association as we realize that results will be accomplished on the question of our relations with the public and the practice of medicine only in proportion to the interest the individual practitioner takes in his contacts with the patient and the public; in other words, the contribution each one of the two thousand men of the State Association makes toward solving economic and public health problems that affect both the medical practitioner and the patient. The small group meeting has done more to eliminate petty local disagreements among medical men and to clarify their thinking on public health and medical economics than any other activity of the Committee.

The forces of state, industrial, and insurance medicine, the large endowed philanthropies, free clinics and complicated equipment used in modern practice are vitally influencing scientific medicine, economics and public health. The Medical Profession must be organized and have definite policies if it is to have any share in determining:

1. Who Shall Control the Health Policies?
   a. The Laity?
   b. Charlatans?
   c. The Medical Profession?
2. What Shall These Health Policies Be?

Respectfully Submitted,

H. B. Bailey, J. S. Holbrook,
R. O. Beard, John A. McIntyre,
B. J. Branton, F. H. Magney,
Henry W. Cook, F. H. Neher,
C. O. Estrem, Theodore Sweetser,
H. F. Helmholz, George Earl, *Chairman.*

DR. MANLEY: This is a particularly full and complete report and the Reference Committee wishes to commend the Public Health Committee on the excellent work done. We approve a recommendation of the committee that a resolution be sent to the State Fair Board asking them to consider the possibility of re-establishing a Public Health Building which was abolished three years ago.

PRESIDENT BOYER: You have heard the report. What shall we do with it?

A motion was made and carried that the report be accepted.

DR. EARL (St. Paul): I have a copy of the Minneapolis Tribune which carries an advertisement of "Theronoid" which bears the endorsement of the Women's Federation of Clubs. If you men don't know what Theronoid is, it is supposed to relieve catarrh, rheumatism, high blood pressure and many other ills. That problem we have to return for some consideration by Hennepin County itself and also take it up with the Women's Auxiliary.

The studies now being made by the Committee on the Cost of Medical Care are placed in three groups:

1. Survey of data showing the incidence of disease and disability requiring medical service and of extending facilities.
2. Studies of the cost of medical service and returns to the agents furnishing such service.
3. Analysis of significant special experiments in provision of medical care.

While no definite report has been completed to date solving the problem of cost of medical care, all who are interested in the cost of medical care have an opportunity to express opinions as to the improvements that can be made and disadvantages of already selected courses of procedure prescribed by others.

In this state we have this unique relationship with the public health agency, and we believe that by working the two together we are able to receive the most efficient results.

I know everybody in this room received a copy of the Graphic, and you can't pick up the Kiwanis Magazine or any other magazine nowadays that there isn't an article in it by somebody on the cost of health.

While it is true that economics is the basis of all progress, the factors underlying the problem of health and sickness are, first, finding human happiness through efficient medical services, and, second, an economic factor. Now, scientific knowledge, ability, simplicity of diagnosis and more efficient care and treatment have progressed to a place where only the economic factor blockades the pursuit of the patient of moderate means in finding human happiness. You might be interested to know that in this analysis it is stated that the doctor's share of the cost is 17.6 per cent, or between one-sixth and one-fifth of the total cost goes to the doctor. Private duty nurses get 8.2 per cent; practical duty nurses, 5.8 per cent; attendants, 4 per cent; dentists, 5.8 per cent; hospitals 29.3 per cent; druggists and medicines, 27.3 per cent. You see, the cost for drugs and medicines is 27 per cent as compared with 17 per cent that goes to the doctors. Of course, that is the great quack medicine graft. Chiropractors and osteopaths, 2 per cent. The total approximated cost of medical care secured from Dr. W. S. Rankin's report in the American Journal of Public Health, April, 1929, totals $2,500,000.00. In addition to the expense of medical care there is a great loss to the people of the United States from decreased earning capacity, and this is estimated at $2,000,000.00, which is estimated at 44.4 per cent of the total cost of illness. The average wage earner, according to the United States Bureau of Labor statistics, pays $60.39 a year for medical service, which is 55.6 per cent of the total cost of illness to the average individual.

How is this going to be met? None of us feel that the hospitals are trying to profiteer, but there may be some leaks. Is it reasonable to suppose that is the only solution? And we have industries and department stores that are providing health service. Probably some type of insurance as Dr. Meyerding mentioned for the veterans is the best. Increasingly the hospitals are hiring full time salaried doctors with offices in the hospital, operated for non-profit, or rent offices to doctors practicing for fees.

Many anticipated solutions to find ways and means to reduce the burden of cost to the patieint of moderate means are being tried out. Hospitals are providing greater spread of rates, eliminating or combining special charges. Flat rates and sliding scale of charges are provided for individuals according to their means or ability to pay. Long time payments or the installment system is being tried with hospital charges.

The question has been asked by some of our leading authorities regarding hospital and medical costs, whether the patient of moderate means could pay for his medical care even if the entire hospital and medical world would adopt every one of the new policies outlined in this study? No one is able to answer this question for the present. No one knows what the individual can afford to pay. While the income of the general middle class is approximated from less than $1,000 to $3,000 per annum, the economic ability of the individual must be considered when individuals have different tastes and modes of living, and depends greatly on his ability to pay for medical care. If the individual is an appreciative type for the service rendered to him and has a knowledge that the cost is not exorbitant, he is most willing that the accounts for medical attention be given his immediate consideration. The individual who is willing to forego minor comforts and luxuries will meet the cost of medical care with little difficulty.

The attention of an individual, recently, has brought this matter to a degree of enlightenment. This individual had a compound spiral fracture of the leg. His hospital bill amounted to approximately $250.00 and the doctor, at that time, had not sent him a statement. He borrowed funds and together with the small amount of his savings, paid the hospital bill promptly. Thereupon, he borrowed $100.00 from a loaning agency and paid the bone specialist. After paying this amount

back on payments of $5.00 a week, he again borrowed $100.00 and paid his family physician.

Relative costs are not high when one compares our modern standard of living today with that of twenty-five years ago. While there has been increased cost in living expense since the war, as well as increased cost in supplies and equipment to the hospital and doctor, there has been little increase in the cost of hospital care to the patient in a percentage of comparison to the increased costs of hospital operation, keeping in mind the cost of medical care of fifteen to twenty-five years ago with the average income of that time in comparison with today.

Perhaps state medicine, free or part free clinics, and hospitals would solve the problem of the high cost of medical care to the individual, but who is going to pay the actual cost of this service. It is unnecessary to state that there are tangible ways of reducing the cost of medical care through securing better management and control of hospital economies in refusing the patient unnecessary comforts, special nurses when not necessary and refusing private and semi-private rooms to individuals who cannot afford the more expensive rooms, and installing a system of group nursing. Hospitals are not profiteering although 29.3% of the medical costs are charged to hospital care.

Equal Distribution of Costs.—The unequal distribution of the cost of illness is perhaps more or less the source of our trouble. Canada has attacked this problem by taxing all citizens and sharing a portion of the medical costs. Public health and prevention of disease is now one of our tax supported movements. Is it reasonable to believe that we should come to an equal distribution in taxing all individuals to bear a portion of the burden of the cost of illness? In many industries and department stores group health and accident insurance are being purchased at an average cost of seventy-five cents per month to individuals. Some urge if such a plan were made effective to all individuals of the United States, hospitals, doctors and medical attendants would be assured of payment of their charges; free work to a large extent would be discontinued and patients would have the free choice of the doctor and hospital, if needed, and compensation insurance would be discontinued, which would provide increased wages to the employees and all members of the individual's family would be entitled to insurance on this proposed agreement.

This form of distribution of costs appears to be the most favorable that would aim to work out with little difficulty and would provide a greater degree of economic happiness to all.

Future of Medical Care.—According to the last report of the American Medical Association several of the small hospitals have been consolidated to provide less overhead and duplication of equipment. While mergers have their faults and failings, to a certain degree mergering does promote efficiency and reduces overhead costs. Probably the hospitals of tomorrow will include full time salaried doctors with offices in the hospital, operated for non-profit, or rent offices to doctors practicing for fees. As we take cognizance of the progress being made in the realm of medicine, we should be concerned with the trend of economic advances also. The hospital of tomorrow may embrace all of the medical units for complete medical care.

PRESIDENT BOYER: I think Dr. Earl stands prepared to answer any questions that any of you desire to ask. The Chair desires that you do ask questions.

DR. WRIGHT: If one can first determine the major costs of medical practice something may be accomplished. In the first place there is expense incurred through loss of time by the injured employe. A prolonged stay in the hospital is another expense, and this might be reduced by establishing a type of hospital which is less expensive, similar to the convalescent hospitals in New York. Another problem is use of patent medicines. I think Dr. O'Brien is attacking this in a very intelligent and helpful manner. Dr. Earl and his committee are doing a tremendous work along this particular line in the way of popular education.

PRESIDENT BOYER: Dr. Locken.

DR. LOCKEN: I might just say one thing that has been my personal experience. I have served as chairman of the Committee on Public Health of the League of Minnesota Municipalities for the past eight years. I have given them a report each of those eight years. We have started this work out from nothing, until the past year they made the public health one of the main considerations of their program for the coming year. I think the important thing of this whole endeavor of the medical profession in getting contact with the public is to come out frankly and present problems of public health to the people in just these ways. I found a very anxious interest to know more about these things on the part of the people. As we do more of that work we will find we will have to spend less money on our actual legislative programs. I think we have had to force it down their necks in the past years because there has been so little preliminary work. But I think in future years we will never have to do this if we first give them some of the information they are entitled to. The fact that we have spent so much money on the Legislative Committee in the past year means that we are just turning over the soil for the first time. I think if we go at this in the right way it will bring increased benefits in the future.

PRESIDENT BOYER: To accept the report of this committee is tantamount to approving the continuation of the committee and the continuation of the expense. We would like to have others ask questions and make remarks before we dispose of this report. We have an exhibit from the American Medical Association in the display here in which Theronoid and Pfunder's pills are touched upon.

DR. PEARCE (Minneapolis): The matter of the Pfunder tablet has been up many times before the Hennepin County Medical Association. In our opinion, at least, we have felt the best thing to do was to do nothing, that any attempt on our part to fight that thing merely serves to advertise it more. The newspapers of Minneapolis have been coöperating with us, and a great many advertisements of that character have been turned down by them. I don't think we appre-

ciate sufficiently the work Dr. O'Brien is doing on the radio. All those who listen to the merits of Sargon as broadcast on KSTP should appreciate the fact that WCCO allows a censorship of these things by Dr. O'Brien, and I think we should go after KSTP and try to get them to permit the same thing, but otherwise I think we should ignore it.

The report was here accepted by a vote.

PRESIDENT BOYER: The Reference Committee.

DR. MANLEY: Next is the report of the Editing and Publishing Committee.

REPORT OF EDITING AND PUBLISHING COMMITTEE

January 1, 1929, to December 31, 1929

In presenting this, the twelfth annual report on the publication of the Association's journal, MINNESOTA MEDICINE, for the calendar year 1929, this Committee is pleased to announce that the journal continues to operate at a profit, the cash receipts for the year being $1,081.52 in excess of expenses. This amount has been remitted to the treasurer of the Association. The net cash receipts for 1929 showed a gain over the preceding year.

The twelve issues of the journal included in Volume XII, 1929, contained a total of 1,244 pages, an average of 103.6 pages for each month. Of this total, 820 pages were devoted to reading matter and 424 pages to advertising, an average for each monthly issue of 68.3 pages of reading matter and 35.3 pages of advertising. Had all the editorial material supplied readers of the journal during the year been published in book form, it would have made a volume of 1,000 pages with nearly 200 illustrations.

The total number of articles published during the year was 129, of which 28 were case reports, and one article by a layman. Other case reports and discussions of interest not listed as individual contributions appeared in the Proceedings of the Minnesota Academy of Medicine and the Transactions of the Minneapolis Surgical Society. The total number of illustrations included in all articles published was 195, an average in excess of 16 for each issue.

In April, 1930, the vacancy in the editorial staff left by Dr. F. W. Schlutz, who is now located in Chicago, was filled through the appointment of Dr. Lewis M. Daniel of Minneapolis as Assistant Editor in charge of the abstract department. Dr. Daniel has already communicated with the supervisors of the various sections in the abstract department and through their cooperation hopes to continue this section as a leading department in the journal.

An effort is being made this year to create more interest through the offices of the Associate Editors in the general news items published. Each Associate Editor has been urgently requested to collect items of interest concerning members in his particular district, sending them in for publication at a stated time each month. While news items have been received intermittently from the Associate Editors in the past, it is felt that a definite time and amount of material required will do much to improve the department of General Interest items during the coming year.

It is gratifying to report that MINNESOTA MEDICINE continues to be regarded as one of the best of the state medical journals. Since the publication was established more than a dozen years ago, earnest efforts have been made to maintain a high editorial standard. Advertising has been carefully censored, and with rare exceptions nothing has appeared in the columns of our state journal not conforming to A. M. A. standards. The American Medical Association tells us that the journal is highly regarded among the better class advertisers. Undoubtedly our advertising volume could be materially increased were we willing to accept border line advertisements.

The circulation of MINNESOTA MEDICINE for the year 1929 is reported as follows:

Members (paid)	2,058
Members (delinquent)	140
Outside subscriptions	118
Miscellaneous copies distributed (exchanges, complimentary copies, advertising copies, etc.)	289
Surplus on file	120
	2,725

The following report of receipts and disbursements was submitted to the secretary of the Association in January, 1930:

Cash Receipts

Subscriptions, Members	$ 4,116.00	
Subscriptions, Non-members	428.20	
Advertising	9,294.79	
Advertising Dividend	377.53	
Illustrations	5.58	
		$14,222.10

Disbursements

Journal expense	$11,953.89	
Discounts allowed:		
Advertising	$1,172.29	
Subscriptions	14.40	
	1,186.69	
		13,140.58
Surplus cash in bank		$ 1,081.52

Respectfully submitted,

EDITING AND PUBLISHING COMMITTEE.

J. T. CHRISTISON, *Chairman.*

DR. MANLEY: The Reference Committee recommends the adoption of this report, with the following recommendation:

In view of the rapidly changing economic conditions affecting the medical profession, and its many great problems constantly presenting themselves for solution, we believe that more attention should be given to the consideration of economic problems in the State Journal and that more space should be devoted to questions aside from the scientific side of medicine. The Committee also recommends that some consideration be given to the question of employing a special editor for this purpose.

A motion was made and carried that the report be accepted.

DR. DRAKE (St. Paul): I want to thank the members for their support of the magazine and want to ask their continued support.

DR. MANLEY: We now have the Necrologist's report.

NECROLOGIST'S REPORT

June, 1929, to May, 1930

MEMBERS OF MINNESOTA STATE MEDICAL ASSOCIATION

F. A. Allen, Ironton. Born 1876. George Washington University of Medicine, 1905. Died May, 1929. Age 53.

Louis N. Benepe, Saint Paul. Born 1862. Missouri Medical College, St. Louis. Died Feb. 14, 1930. Age 68.

Floyd E. Best, Wells. Born 1887. Northwestern University, 1911. Died Nov. 9, 1929. Age 42.

C. W. Bjorgo, Cannon Falls. Born 1881. Rush Medical, 1918. Died May 7, 1929. Age 48.

William J. Byrnes, Minneapolis. Born 1859. University of Michigan Medical School, 1882. Died Nov. 4, 1929. Age 70. Past President Hennepin County Medical Society.

Charles L. Carman, Saint Paul. Born 1859. University of Minnesota, 1897. Died Dec. 13, 1929. Age 70.

Alva A. Conley, Cannon Falls. Born 1890. University of Minnesota, 1914. Died March 11, 1930. Age 40.

Paul Burns Cook, Saint Paul. Born 1877. University of Minnesota, 1900. Died Feb. 9, 1930. Age 53. Vice President Ramsey County Medical Society.

Horace S. Davis, Duluth. Born 1855. Ann Arbor, Dartmouth, 1884. Died May 4, 1929. Age 74.

W. G. Eisenman, Chisholm. Born 1885. University of Michigan, 1909. Died Dec. 9, 1929. Age 44.

Louis McCargo Fowler, Rochester. Born 1901. University of Pennsylvania, 1924. Died July 1, 1929. Age 28.

Liston Q. Greeley, Duluth. Born 1868. University of Minnesota, 1897. Died Sept. 23, 1929. Age 61.

H. N. Hovde, Duluth. Born 1861. University of Oslo, Norway. Died Dec. 24, 1929. Age 68.

John H. James, Mankato. Born 1846. New York University. Died Sept. 19, 1929. Age 83.

Aloysius Julius Kaufman, Franklin. Born 1875. University of Pennsylvania Medical School, 1899. Died March 23, 1930. Age 55.

A. A. Law, Minneapolis. Born 1872. University of Minnesota 1894. Died July 9, 1930. Age 58. One of the founders of the American College of Surgeons.

Arthur E. Lund, Saint Paul. Born 1890. Rush Medical College, 1925. Died Aug. 10, 1929. Age 39.

Charles Stanley McVicar, Rochester. Born 1880. Western Medical College, London, 1904. Toronto University, 1907. Died June 29, 1929. Age 49.

Marion A. Mead, Minneapolis. Born 1860. Women's Medical College of the N. Y. Infirmary for Women and Children, 1895. Died Sept., 1929. Age 69.

A. G. Moffat, Howard Lake. Born 1865. University of Minnesota, 1895. Died Dec. 18, 1929. Age 64. President Wright County Medical Society.

Louis A. Nippert, Minneapolis. Born 1860. Miami Medical College of Cincinnati University, 1883. Died Nov. 6, 1929. Age 69. President Hennepin County Medical Society. President Minnesota Academy of Medicine.

C. K. Onsgard, Halstad. Born 1863. Eclectic Medical College of Cincinnati, 1887. Died Nov., 1929. Age 66.

C. Eugene Riggs, Saint Paul. Born 1853. College of Physicians and Surgeons, Baltimore, Md., 1880. Died April 3, 1930. Age 77.

Olaf Thorstein Sherping, Fergus Falls. Born 1864. Keokuk Medical College, 1893. Died Dec. 7, 1929. Age 65.

Peter Theodore Torkelson, Lyle. Born 1881. University of Illinois Medical College, 1908. Died Feb. 18, 1930. Age 49.

J. P. Von Berg, Albert Lea. Born 1858. Hahnemann Medical College, Chicago, 1884. Died Dec. 5, 1929. Age 71.

Henry E. Webster, Duluth. Born 1862. University of Toronto, 1884. Died March 7, 1930. Age 68.

Mary J. S. Whetstone, Minneapolis. Born 1849. University of Michigan, 1882. Died Oct. 24, 1929. Age 80. Vice President State Medical Association.

Arthur W. Whitney, Saint Paul. Born 1864. Queens College, Kingston, Ontario, 1888. Died Sept. 14, 1929. Age 65.

L. L. Gibbon, Lowry. Born 1875. University of Minnesota, 1897. Died 1930. Age 55.

PHYSICIANS NOT MEMBERS OF STATE ASSOCIATION AT THE TIME OF THEIR DEATH

Joseph T. Asbury, Rochester. Born 1875. College of Medicine of the University of Illinois, 1902. Died July, 1929. Age 54.

Joseph E. Campbell, Melrose. Born 1853. Died March, 1930. Age 77.

Daniel C. Darrow, Crookston. Born 1850. Died Jan. 10, 1930. Age 80.

John Ekrem, Gully. Born 1866. Minneapolis College of Physicians and Surgeons, 1903. Died May, 1930. Age 64.

Lorenzo A. Gray, Fairmont. Born 1899. Died Feb. 27, 1930. Age 31.

Henry F. Hoyt, Long Beach, California. Born 1854. Rush Medical College. Died Jan. 21, 1930. Age 76.

Ethel Hurd, Minneapolis. Born 1846. University of Minnesota, 1897. Died Aug., 1929. Age 83.

E. R. Jellison, Minneapolis. Michigan, 1883. Died Jan. 27, 1929.

Hugo H. Miller, Minneapolis. Born 1865. Minneapolis College of Physicians and Surgeons, 1892. Died Sept. 4, 1929. Age 64.

Louis L. Moench, Waterville. Born 1875. Eclectic Medical College, Cincinnati, 1902. Died June 2, 1930. Age 55.

James B. Muir, Roseau. Born 1860. Bennett Medical College, Chicago, 1885. Died Oct., 1929. Age 69.

William B. Murray, Minneapolis. Born 1862. Minneapolis College of Physicians and Surgeons, 1890. Died Aug., 1929. Age 67.

N. A. Nelson, Dawson. Born 1855. King Eclectic Medical College, 1884. Died Sept., 1929. Age 74.

Francis M. Prettyman, Northfield. Born 1850. Died Feb. 13, 1930. Age 80.

James A. Rippert, Duluth. Born 1886. College of Physicians and Surgeons, Baltimore, 1910. Died July, 1929. Age 43.

C. L. Schneider, Deer Creek. Born 1873. Wisconsin College of Physicians and Surgeons, 1902. Died Sept., 1929. Age 56.

Samuel M. Stocker, Fergus Falls. Born 1857. New York University Medical College, 1885. Died Nov., 1929. Age 72.

P. A. Walling, Park Rapids. Born 1850. University of Buffalo, 1876. Died May, 1929. Age 79.

Charles W. Watson, Minneapolis. Born 1867. Minneapolis College of Physicians and Surgeons, 1897. Died May, 1930. Age 63.

George O. Welch, Fergus Falls. Born 1860. Boston University, 1887. Died June, 1929. Age 69.

George J. Wilson, Moorhead. Born 1835. Died Sept., 1929. Age 94.

E. W. Young, Minneapolis. Born 1852. Minneapolis College of Physicians and Surgeons, 1896. Died Feb. 19, 1930. Age 78.

Benjamin M. Randall, Graceville. Born 1858. Rush Medical College, 1883. Died May 24, 1930. Age 72.

Some had carried the honored name of physician but a few years of their youth, some through the many years of their maturity. To each is applicable the kindly description of the ancient poet, "It was his part to learn of the power of Medicine and of the manner of healing, and, heedless of Glory, to exercise that quiet art" (Virgil).

OLGA S. HANSEN, *Necrologist.*

PRESIDENT BOYER: We will now stand with bowed heads for a moment in memory of our departed brethren.

The audience arose and stood in silence.

DR. MANLEY: Next is the report of the Historical Committee.

REPORT OF HISTORICAL COMMITTEE

Your historical committee desires to submit the following report. On three previous occasions, the committee has outlined its program for future activities, given the chapters under which the history is being prepared, told something of the search for material and reported the progress already made in different directions. It seems hardly necessary to repeat these statements.

Additional items of information are continually being brought to our attention and we wish particularly to express our appreciation on account of material relating to the very early physicians in this territory, obtained through the State Historical Society.

The task of putting the facts at our disposal into some sort of literary form is proving even greater than that involved in the original search for material and we are now informed that it will probably require quite one year for publication, even after the manuscript is complete.

In view of the above, the committee looks with some skepticism on its earlier somewhat rosy prognosis as to an early date of publication.

In the interim, the committee desires to call attention to what it considers an injustice done the pioneers who founded the first medical society in 1853. On July 23, of that year, sixteen medical men of the territory (Drs. Thos. R. Potts, James D. Goodrich, W. W. Finch, John J. Dewey, and T. T. Mann, of St. Paul; John H. Murphy and Charles L. Anderson, of St. Anthony Falls; A. E. Johnson, St. Anthony City; and Alfred E. Ames, Hennepin County, were actually present. Drs. A. W. Daniels, of St. Peter; MacDougall, of Fort Snelling; C. Carli, of Stillwater; and P. P. Marsh, J. H. Day, A. G. Brisbine and Samuel Willey, all of St. Paul, were made charter members on account of interest previously expressed in the organization) met in St. Paul and assisted in the organization of the Minnesota Medical Society. This is substantiated by the report in the lay press of that date (the St. Anthony Express, Vol. III, No. 10, July 30, 1853) and by a note in the Boston Medical and Surgical Journal, Oct. 12, 1853, from Dr. William W. Finch, of St. Paul. Officers were elected, committees appointed and a constitution and by-laws adopted. There is reliable evidence that subsequent meetings were held in 1856 and in 1867 and it is probable that still other meetings were held. Subsequently the society languished and finally ceased to function during the Civil War and up to 1869.

On Feb. 1, 1869, a meeting of the physicians of Minnesota was held in St. Paul. Considerable time was spent in discussing the question of whether they were reviving a preëxisting society or forming a new organization. The final action taken certainly endorsed the idea of forming a new society but a careful survey of the minutes of the meeting suggests little basis for the contention that a really new society was formed.

At this meeting of 1869, it was accepted that a "Minnesota State [?] Medical Society" had been formed in 1855. Though both name and date are incorrect, this obviously referred to the old society. In any reference to the society, found between 1853 and 1869, Dr. Thomas R. Potts, of St. Paul, appears as the President and Dr. John H. Murphy, of St. Anthony Falls, as the Vice President, and these two were accepted, by virtue of their previous positions, as the presiding officers of the new assembly. The Board of Censors of the old organization served in the same capacity for the new organization and proposed a list of names of those duly qualified for membership, which list was accepted. Even the old Constitution and By-Laws were adopted with no change except as to the date of meeting.

The Hennepin County Medical Society passed through a practically identical experience. On June 20, 1855, a society known as the Union Medical Society of St. Anthony and Minneapolis was organized at the home of Dr. A. E. Ames, in Minneapolis. Very much as the territorial and state organization had done, it struggled through the Civil War period with only occasional meetings. In March or April of 1869, it was renamed the Hennepin County Medical Society and in June of 1870 it was reorganized. Notwithstanding these changes in its name, its periods of service and its reorganization, the Hennepin County Medical Society has never hesitated to consider its birth date as June 20, 1855.

Considering, then, that a medical society was actually formed in Minnesota Territory in 1853, that it functioned more or less well as a pioneer organization to 1869, that the old officers held over even into the organization of the new society, controlling the methods of procedure and even censoring the names of applicants for admission and considering that the old Constitution and By-Laws were adopted without essential alteration, it is the opinion of your committee that these societies, practically alike in name, serving the same communities, actuated by the same principles, having the same officers and operating under the same Constitution and By-Laws, should be considered as one society and that the date of our founding be accepted as July 23, 1853.

A. S. HAMILTON, M.D., *Chairman.*

ADDENDA

It seems that the necrologist of this society could well be a member of the Historical Committee delegated by the chairman to tabulate the necrology reports. The work of the two committees overlaps and it would seem that the necrologist may be of some assistance in the collection of historical material.

DR. MANLEY: This is a very complete and comprehensive report, and the Reference Committee wishes to commend the Historical Committee. We also recommend the adoption of a resolution making the Necrologist of this Society a member of the Historical Committee. We also recommend, and I move, that the report be accepted.

PRESIDENT BOYER: Bear in mind that the recommendation to place the Necrologist on the Historical Committee really has to be accomplished by way of an amendment to our by-laws. It is needless to state that as a member of the Historical Committee the necrology reports will be handed in by way of that committee. Is there any further discussion?

DR. WORKMAN (Tracy): The first President of this Society was Dr. Potts. He was elected in 1853. The Society didn't meet every year, but along about the time of the Civil War members ceased to meet; they met again with Dr. Potts in the chair. They adopted the old by-laws and the old organization name and all, but in the reorganization they appointed a committee on credentials. In the written minutes this committee was appointed to eliminate certain men that were very irregular. It shows that in 1869 there were more irregular physicians in Minnesota than there were regulars, and that was one way of getting rid of them. That is why I move the adoption of 1853 as the year of the birth of this organization, and this would be the seventy-seventh meeting, and I make that as a motion.

Motion was carried.

PRESIDENT BOYER: As the acceptance of this report implies the amending of the by-laws, Dr. Coventry will write an amendment in conformity therewith.

DR. COVENTRY: Here is the amendment:

"RESOLVED, That Chapter IX, Section I, be amended by striking out the words 'A committte on Necrology' and that the duties of this committee be transferred to the duties of the Historical Committee."

A motion was made and carried that the report of the Historical Committee be accepted.

PRESIDENT BOYER: The Reference Committee.

DR. MANLEY: The report of the Radio Committee, Dr. S. R. Maxeiner, Chairman.

REPORT OF THE RADIO COMMITTEE

One hundred seventeen radio programs were broadcast under the direction of the Radio Committee from April 3, 1928, to June 1, 1930. With the exception of two programs from KSTP, all have been sent from Station WCCO.

The regular health service feature has been given every Wednseday morning at 10:15 with the exception of holidays by Dr. Wm. A. O'Brien, Associate Professor of Pathology, University of Minnesota. A list of the subjects follows: (1) The Modern Health Problem, (2) Well Balanced Diet, (3) Fresh Air, (4) Rest and Sleep, (5) Prevention of Diphtheria, (6) Typhoid Fever, (7) Maternal and Infant Hygiene, (8) The Goiter Problem, (9) Care of Wounds, (10) Rabies, (11) How We Breathe, (12) Diseases of the Liver, (13) Outlook for Young Diabetics, (14) Circulation of the Blood, (15) Vitamines, (16) How the Well Can Help the Sick, (17) What Is a Neurotic? (18) How We Hear, (19) The Cause of Cancer, (20) Cathartics and Appendicitis, (21) Factors in the Health Problem, (22) Cancer of the Stomach, (23) Correcting Nature's Mistakes, (24) Cause of Anemia, (25) Getting the Children Ready for School, (26) Heat Stroke and Exhaustion, (27) Obesity, (28) Cancer of Breast and Uterus, (29) Foreign Bodies in the Lungs, (30) Paralysis and Will Power, (31) Conquest of Tuberculosis, (32) Influenza, (33) Gas Poisoning, (34) Children and Tuberculosis, (35) Why We Worry, (36) Physical Activity, (37) What Is Arthritis? (38) Tularemia, A Disease of Man and Animals, (39) The First Year, (40) Fish as a Food, (41) Burns, (42) Ultra-Violet Rays, (43) Gallstones, (44) Care of the Feet, (45) What the Modern Hospital Means to You, (46) Problems of Maturity, (47) Fractures, (48) Varicose Veins, (49) Emotional Instability, (50) High Blood Pressure, (51) Medical Superstitions, (52) Mucous Colitis, (53) Hay Fever, (54) Ulcer of the Stomach, (55) Inflammation of the Middle Ear, (56) Prevention of Heart Disease, (57) Pasteurized Milk, (58) Adopting a Baby, (59) Rheumatic Heart Disease, (60) Ptomaine Poisoning (A Myth), (61) Eczema and Dermatitis, (62) First Aid, (63) Small Town Health Problems, (64) Fumigation, (65) Prevention and Early Treatment of Disease, (66) Hot Weather and Health, (67) How Long Will You Live? (68) Modern Treatment of Tuberculosis, (69) Babies in Hot Weather, (70) Need for a Psychopathic Hospital, (71) Diseased Tonsils and Adenoids, (72) Undulant Fever, (73) Cancer Facts, (74) Heart Pains, (75) Advances in Public Health, (76) Tetanus, (77) Catarrhal Deafness, (78) Pellagra, (79) Diseases of Allergy, (80) Story of Muscle, (81) Care of Feet and Legs in Diabetes, (82) Fall and Winter Babies, (83) When Deafness Comes, (84) Cirrhosis of the Liver, (85) Blue Ribbon Children, (86) Cause of Headaches, (87) Carbon Monoxide, A Menace, (88) Disseminated

Sclerosis, (89) Anesthesia, The Great Gift, (90) Cause and Prevention of Bunions, (91) Health and Safety, (92) Infantile Paralysis, (93) Preventable Blindness, (94) Pork Worm Disease, (95) Glaucoma, (96) Feeding the Problem Child, (97) Treatment of High Blood Pressure, (98) Dangers of Self-Medication, (99) Cause of Bronchitis, (100) Facial Paralysis, (101) Cancer Cures, (102) White Versus Brown Bread, (103) Safeguarding Motherhood, (104) Code of Medical Ethics, (105) Inflammation of the Mastoid, (106) Christmas Seal, (107) Measles.

In addition to the regular Wednesday morning feature from WCCO, the following programs have been sponsored: (108) Cosmetic Nostrums, Dr. Arthur J. Cramp, American Medical Association, (109) American College of Surgeons, David Jolly, Houston, Texas, (110) Periodic Health Examinations, Dr. W. D. Haggard, Nashville, Tenn., (111) Keeping Fit, Mr. A. R. Jones, Gorgas Memorial, (112) Teen Age Problems, Dr. W. A. O'Brien, Hennepin County T. B. Association, (113) Pre-School Child, Dr. W. A. O'Brien, Federation of Women's Clubs, (114) Installation of President American Medical Association, (115) Visiting the Sick, Dr. W. A. O'Brien, Minnesota State Hospital Association, (116) New Childhood, Dr. W. A. O'Brien, Minnesota Public Health Association, (117) Problems of Tuberculosis, Dr. F. M. Pottenger, American College of Physicians.

Censorship.—Station WCCO volunteered to turn over the problem of passing on all medical advertising to the Committee. Since then, nothing has appeared on the air from WCCO of objectionable nature, because of this arrangement. There was one program which was approved and later proved to be objectionable. This was because of misrepresentation on the part of the advertiser, and the station regrets it just as much as we do.

Publicity.—Good publicity has been received from all the papers and the station. Announcements of the programs appear in the press and are given over the air at frequent intervals. In addition, since January 1, 1930, all programs have been made in advance and are now published in MINNESOTA MEDICINE. More recently they have been carried by the Journal-Lancet and some of the newspapers. Everybody's Health now carries "Health from the Air" extracts from the programs since May 1, 1930.

Audience.—We are still reaching the state of Minnesota, parts of North and South Dakota, Iowa, Wisconsin, and northern Michigan. We have been informed that our audience has grown to a remarkable size and that the health service feature is now one of the main attractions of WCCO. Letters from interested listeners vary from four to three hundred per talk. When the audience is promised a copy of the talk, a large number write in; otherwise, few letters are received except those asking for advice and offering suggestions for future programs. As the program is part of the Women's Hour feature of the station, naturally, a large percentage of our audience is women. We believe this is very desirable as it is through the women that we reach the home and family. The number of convalescents, invalids, and shut-ins remains about the same. They have been very much interested in the talks and write frequently.

Our letters also indicate that a large number of men are now listening. This is very desirable, and the number could be increased by an evening feature. Many persons ask why we do not broadcast in the evening when they can remain at home and listen. It seems best at the present time to concentrate on the morning hour as we get a very desirable audience in this way, desirous of instruction. When the programs were first started, the station told us that if it was a success future prorgams could probably be arranged at different time. The Committee feels that it is now opportune for us to think about developing an evening feature as well.

The number of physicians who listen to the programs is probably not very great. This is undoubtedly due to the fact that the programs come in the morning when most doctors are busy; however, many doctors have written to assure us of their interest and hearty cooperation and state that they make a special effort to listen in to learn what the people are being taught. Any way that we could develop this feature would be most desirable, because it is felt that the suggestions we are making to the public should be known to the doctors.

The air is polluted at the present time with all sorts of quackery, and it is only through our service that we will be able to meet this form of opposition. Many of the other stations carry objectionable advertising programs, but it is very difficult to know what to do about it, as jurisdiction over this matter comes from two sources—the Federal Trade Commission and the Federal Radio Commission. The action of the American Medical Association on objectionable medical advertising is being watched with interest, and it will probably point the way to more effective censorship on the part of your Committee.

We wish to thank Station WCCO particularly for the splendid coöperation we have received. If we had to pay regular advertising rates for our time, it would have amounted to thousands of dollars. The Station has very gladly donated this because they appreciate that our Association is attempting to do a very worth while piece of work. It is now believed that we have over one million weekly listeners, and many of them listen with regularity. We are now entering on our third year of broadcasting and believe that the future holds still greater possibilities in store for us. The Committee feel that the service has been a marked success and urge that it be continued.

S. R. MAXEINER, M.D., *Chairman.*

DR. MANLEY: The Radio Committee has done an immense amount of valuable work, and we wish to commend the work of this committee. We also wish to ask the House of Delegates to give Dr. O'Brien a vote of thanks for his radio health talks with which we are all familiar. He now has an immense audience and this is undoubtedly one of the most valuable methods of reaching the public which can be adopted.

The report of the Radio Committee was voted upon and accepted.

PRESIDENT BOYER: We would like to hear from Dr. O'Brien.

DR. O'BRIEN (Minneapolis): We feel that we have gained ground the past year as we did the year before. We are adding new friends, and it was a pleasure to walk around the lobby today and to meet so many doctors who told me so many of their patients have been listening in and getting beneficial results from the talks. In addition to the women we are getting a large number of men who are now listening in. Because we have received so few criticisms in the past I am afraid not many doctors are listening, because if they were we would be getting letters stating that they did not like some of the things we said. I wish to state that at five o'clock this afternoon the Radio Committee will be talking over WEBC, Duluth. I thank you. (Applause.)

DR. MANLEY: Report of the Committee on Hospitals and Medical Education, Dr. Pearce, Chairman.

REPORT OF THE COMMITTEE ON HOSPITALS AND MEDICAL EDUCATION

June 1, 1929, to May 31, 1930

Your Committee has been working in the past year much along the lines of the program that has been under way for the past several years. The three major activities of the Committee are the Extension Courses, the Colloquium Lecture Series, and the Consultation Bureau.

More Extension Courses have been carried on this year than ever before. It is unnecessary for me to repeat that these Extension Courses are a joint enterprise of the State Medical School, the State Medical Association, and the Extension Division of the University of Minnesota.

The Colloquium Lecture Series is not very different from the regular Extension Course except that it is designed to reach new groups whom we have been unable to interest in the regular courses. Also, in a general way, these courses were designed to correlate the programs of the State Medical Association, the Medical School, the State Board of Health, the Minnesota Public Health Association, and the University Hospital, and furnish an opportunity for these organizations to meet with the practicing physicians of the state. Five of these courses which were offered were quickly subscribed to, in three instances in places where we have never before been able to interest the men in an extension course. More of these courses will probably be offered this fall.

The demand on the Consultation Bureau has been growing slowly. There was a marked increase in interest after the blotters were sent out by Dr. Meyerding. The facilities of this Bureau are without doubt a most valuable source of prompt and reliable confidential information, and we believe in time will prove to be one of the greatest contributions of the State Association to its members. We should express our appreciation of the help and interest of the men who have so freely given their time in helping the Bureau answer the many queries, and to the physicians who have shown the same interest in sending them in.

Dr. O'Brien, the Director of the Bureau, expects to be able to show you a map designating the extension of the use of these services.

Attached to this summary of the report you will find a detailed account of the activities of the Consultation Bureau, the Extension Courses, and a brief outline of the work of the Colloquium Lecture Series which were given this spring at Wadena, Willmar, Litchfield, Faribault, Brainerd, and Winona.

Respectfully submitted,
N. O. PEARCE, *Chairman.*

CONSULTATION BUREAU

March 21, 1929, to Sept. 20, 1929

Organized March 21, 1929.

First inquiry received within 24 hours after announcement; 55 inquiries have been received to September 20, 1929.

Types of inquiries received are as follows:

Case Reports—29; requesting general information, 5; requesting prognosis, 1; requesting diagnosis, 4; requesting treatment, 10; requesting diagnosis and treatment, 7; reading of dental films, 1; question of industrial disease, 1.

Publications—Books to buy, 3; where to publish articles, 1.

Apparatus and Appliances—3.

Medico-Legal—4.

Locum Tenens Appointment—2.

General—Treatment of diseases, 3; courses of study, 2; reliability of radium corporation, 1; state aid for charity patient, 1; patent medicine, 2; drugs, 1; therapy, 1; blood test to prove paternity, 1; use of Schick Test, 1.

Four cases were followed up by further inquiry.

Thirty-nine doctors have used the service.

Eleven doctors have sent in from two to four inquiries.

Number of inquiries received, according to month: March, 1929, 6; April, 1929, 15; May, 1929, 10; June, 1929, 6; July, 1929, 6; August, 1929, 6; September, 1929, 5.

Sept. 20, 1929, to May 20, 1930

Types of inquiries received are as follows:

Case Reports—66; requesting general information, 11; requesting diagnosis, 12; requesting prognosis, 4; requesting treatment, 26; requesting reading of dental films, 1; requesting reading of *x*-ray pictures, 1.

General—Information regarding schools, 1; information regarding books, 4; blood test to prove paternity, 2; patent medicine, 1; drugs, 1.

Medico-Legal—1.

Forty doctors have used the service.

Eleven doctors have sent in from two to six inquiries.

Number of inquiries received, according to month October, 1929, 7; November, 1929, 4; December, 1929, 5; January, 1930, 7; February, 1930, 5; March, 1930, 3; April, 1930, 20; May, 1930, 15.

EXTENSION COURSES

June 1, 1929, to May 31, 1930

Olivia—April 19 to May 10, 1929; 18 registrations; 4 lectures; cost $70.00. Lecturers: Drs. Moses Barron, G. B. Eusterman, T. W. Weum, E. D. Anderson.

Willmar—May 23 to June 27, 1929; 14 registrations; 6 lectures; cost $75.00. Lecturers: Drs. C. N. Hensel

T. B. Hartzell, H. Z. Giffin, K. Bulkley, P. W. Giessler, E. M. Hammes.

Fulda-Worthington—September 3 to October 22, 1929; 35 registrations; 5 lectures; cost $112.50. Lecturers: Drs. E. Bannick, A. F. Bratrud, E. T. Evans, T. W. Weum, G. N. Ruhberg.

Olivia—September 16 to November 11, 1929; 20 registrations; 8 lectures; cost $75.00. Lecturers: Drs. J. F. Fulton, A. H. Beard, C. N. Hensel, E. T. Herrmann, C. B. Wright, Rood Taylor, E. C. Robitshek, S. R. Maxeiner.

Houston-Fillmore County Society—September 27 to October 24, 1929; 12 registrations; 3 lectures; cost $35.00. Lecturers: Drs. E. G. Bannick, H. I. Lillie, J. M. Hayes.

Marshall—October 1 to November 5, 1929; 25 registrations; 6 lectures; cost $135.00. Lecturers: Drs. J. M. Hayes, W. A. Jones, Z. Giffin; Moses Barron, O. H. Wangensteen, H. E. Michelson.

Hibbing—October 3 to November 21, 1929; 20 registrations; 7 lectures; cost $150.00. Lecturers: Drs. H. E. Michelson, E. M. Hammes, A. F. Bratrud, F. J. Hirschboeck, B. F. Davis, J. R. Manley, O. W. Rowe.

Mankato—October 10 to December 19, 1929; 25 registrations; 10 lectures; cost $160.00. Lecturers: Drs. F. C. Rodda, W. C. Alvarez, A. R. Barnes, P. S. Hench, Horace Newhart, C. N. Hensel, N. M. Keith, A. M. Snell, B. S. Gardner, L. A. Buie.

St. Cloud—December 12, 1929, to March 6, 1930; 20 registrations; 12 lectures; cost $96.00. Lecturers: Drs. C. N. Hensel, R. C. Logefiel; W. A. Fansler, R. T. LaVake, Fred Pratt, H. O. Altnow, E. A. Loomis, H. E. Michelson, W. E. Camp, G. R. Dunn, Moses Barron. (Dr. Altnow gave three different lectures in the series.)

Hibbing—April 3 to May 8, 1930; 17 registrations; 6 lectures; cost $160.00. Lecturers: Drs. F. J. Hirschboeck, Franklin R. Wright, A. B. Rivers, J. R. Kuth, H. G. Irvine, W. A. Fansler.

Mankato—April 3 to June 12, 1930; 25 registrations; 10 lectures; cost $160.00. Lecturers: Drs. E. T. Evans, H. M. Connor, E. T. Herrmann, H. B. Sweetser, Jr., E. G. Bannick, T. W. Weum, E. J. Huenekens, W. H. Goeckermann, Walter Camp, and one not yet assigned for the last meeting.

Marshall—April 8 to May 27, 1930; 18 registrations; 8 lectures; cost $185.00. Lecturers: Drs. W. E. Patterson, P. A. O'Leary, R. T. LaVake, F. C. Rodda, C. N. Hensel, L. A. Buie, C. C. Chatterton, V. S. Counsellor.

Willmar (colloquium)—April 17 to June 5, 1930; number of registrations not known; 8 programs; cost $50.00. Cost to General Extension Division $55.00 (estimated).

Brainerd (colloquium)—April 21 to June 9, 1930; number of registrations not known; 8 programs; cost $50.00. Cost to the General Extension Division $72.00 (estimated).

Olivia—April 21 to June 9, 1930; 12 registrations; 8 lectures; cost $85.00. Lecturers: Drs. E. T. Evans, R. C. Logefiel, H. E. Michelson, R. C. Webb, F. C. Rodda, Horace Newhart, R. S. Rizer, and probably A. M. Snell.

Winona (colloquium)—April 22 to June 10, 1930; number of registrations not known; 8 programs; cost $50.00. Cost to the General Extension Division $65.00 (estimated).

Wadena (colloquium)—May 2 to June 27, 1930; number of registrations not known; 8 programs; cost $50.00. Cost to the General Extension Division $80.50 (estimated).

Faribault (colloquium)—May 5 to June 23, 1930; number of registrations not known; 8 programs; cost $50.00. Cost to the General Extension Division $80.00 (estimated).

A SERIES OF COLLOQUIUM LECTURES

Given at Wadena, Willmar, Litchfield, Faribault, Brainerd, and Winona.

A Post-Graduate Medical Short Course of unusual interest is offered to the members of the Minnesota State Medical Association. A program covering eight weeks at a total expense of only $50, payable to the University Extension Division. This course will consist of the following eight programs, two of which are selected from the regular post-graduate short course list.

Lecture No. 1—Minnesota State Medical Association Meeting

The Women's Auxiliary or your wives may attend. At least three of your state officers will be present. Your state president has promised to attend. The Chairman of the Committee on Hospitals and Medical Education, and the Councilors will be the speakers. The subjects to be discussed will be the affairs of the State Medical Society, its activities, and its relation to the practice of medicine.

Lecture No. 2—"Tuberculosis"—Under the Auspices of the Minnesota Public Health Association

The new phases of Childhood Tuberculosis and Lung Tuberculosis will be discussed and illustrated with movies and lantern slides. Speakers to be selected.

Health Meeting: Arrangements can be made with the local Parents-Teachers Association or other organizations for a Health Meeting. The speakers who appear before the medical group will also be available to speak before a lay group on health subjects. Both meetings can be in session at the same time.

Lecture No. 3—"Cancer," "Obstetrics," "Your Hospital"—Under auspices of the University Hospital and Medical College, University of Minnesota.

Lecture No. 4—Speaker and subject to be selected.

Lecture No. 5—"Heart Disease"—Under auspices of the State Medical Association, Heart Committee.

Lecture No. 6—"Immunology, Toxin Anti-Toxin," and other State and local health problems, under auspices of Minnesota Department of Health.

Lecture No. 7—Speaker and subject to be selected.

Lecture No. 8—Under the auspices of University Extension Service, to be selected from the following:

"Uniform Mental Endowment"—Dr. Herbert Sorenson.
"British and American Humor"—Dr. Herbert Eaton.
"Speech Defects"—Dr. Bryng Bryngelson.
"Art"—Mr. S. Chatwood Burton.
"Insects and Human Affairs, or The Battle with the Bugs"—Dr. Royal Chapman.

DR. MANLEY: The Reference Committee recommends the adoption of this very excellent report and wishes to recommend that after the various extension lectures and colloquium courses a report be sent to the chairman of this committee by the local men informing of the success of the meeting from the standpoint of the local society.

A motion was made and carried that the report of the Committee on Hospitals and Medical Education be accepted.

DR. PEARCE (Minneapolis): I haven't very much to add to the report. I simply would say that the chairman of the committee would appreciate any criticism either good or bad from the men who are taking these courses. I might say briefly that our regular extension course plan has seemed to be increasingly in demand each year, and the work of the Consultation Bureau, of which Dr. O'Brien is the head, also seems to be growing. The new colloquium work which has been put on this spring more or less as an experiment, we do not know yet how well they are received and whether they are now put on in the best possible way. We hope, by studying the results this spring, to make changes to improve them. We will at least put on three or four this fall. This lecture series has been the means of reaching into three new districts which we would never have been able to reach with our regular extension courses. Of course, the regular courses will be carried on as usual.

DR. ROBBINS (Winona): I was chairman of the committee that was asked to take on these lectures in Winona, and I took charge of the publicity part and Dr. Steiner carried on the rest of the work. We had a committee of two to carry it out, but we had very little time to prepare. I think Dr. Meyerding came down one week and the following week we started our lectures. We averaged thirty attendance of doctors. The lectures were very interesting and instructive and as a general average everybody was enthusiastic about it. We had a territory of sixty doctors to reach within forty miles of Winona, and we believed that our first attempt of getting half of them to the lectures was well worth our efforts.

PRESIDENT BOYER: If there is approval of this thing it is incumbent upon the delegates from the different component committees to carry home a distinct impression of this committee. This committee operates under considerable expense, as is the case with some other committees. You should express yourselves, as some way favorable or opposed to this sort of work.

DR. ADAMS (Hibbing): We gave the first course last fall. One doctor came about eighty miles, and one doctor came about sixty miles, and neither missed a single meeting. We are arranging for a third course this fall, and we have found it is not only a good educational proposition but is a good feature to get the doctors together. We have no other sort of contact and this has brought us together, and we have also preceded our evening course with a supper and the fellows enjoyed it very much, and I would recommend to those who have not started it that it be done.

DR. MANSON (Worthington): We have had three courses and are so enthusiastic that we are planning another course this fall. Some of them come for forty miles, and out of a membership of about 52 we had an average attendance of 35 to 38, and we feel that from the standpoint of benefit to the doctor the benefits are two-fold—keeping up to date, and the personal contact that comes from getting together in these meetings.

PRESIDENT BOYER: You have heard from Dr. Manson in the southern part of the state and from Dr. Adams in the northern part of the state, telling of the advantages of this work. Are there any other remarks?

We will hear from the Reference Committee.

DR. MANLEY: The Reference Committee recommends the adoption of the report of the Heart Committee. This is a very important committee and the report should be read carefully by all the delegates. We also recommend that this report be specially featured in MINNESOTA MEDICINE, and that the committee continue the excellent work which they have started.

REPORT OF THE HEART COMMITTEE

Since the last report there have been some additional developments in the Heart Committee which might be of interest to your body. In the latter part of November, 1929, a notice was received from Dr. J. A. Myers, President of the Minnesota Public Health Association, stating that the Minnesota Public Health Association had been appointed by the American Heart Association as its official representative in the state of Minnesota. It was the belief of the Minnesota Public Health Association that this affiliation was demanded because the situation in this state was becoming rather acute as far as the control of the public health campaign was concerned. A Heart Committee of the Minnesota Public Health Association was then appointed with Dr. J. A. Myers as chairman and with a total membership of nine, all physicians and two of them members of the Heart Committee of Minnesota State Medical Association, Dr. F. A. Willius and Dr. F. J. Hirschboeck.

The precedent for an affiliation with the Public Health Association has been established in certain states, notably Wisconsin, Iowa, Pennsylvania and New York. It is proposed by the Public Health Association Committee to coöperate fully with the Heart Committee of the Minnesota State Medical Association and to have the latter serve as a liaison committee with the State Medical Society and for the purpose of approach to the practitioners of the state. It is hoped that by means of this affiliation some of the funds at the present time derived from the sale of Christmas Seals may be employed in the furtherance of the campaign regarding heart disease much as it has been used in the past concerning tuberculosis.

It is the wish of the Heart Committee of the Minnesota State Medical Association that the educational work at the present time be restricted to educating the physicians of the state by means of lectures, heart symposia, colloquium courses and use of a short period in each regular program for consideration of a cardiologic subject and to do everything possible to prepare the men in practice in properly conducting heart clinics and to interest themselves in the rehabilitation of chronic cardiopaths and education on the prevention of breakdowns in later years. In order to exert influence on this movement medical men of the state must interest themselves in the broad sociologic and economic phase of the subject and prepare themselves in cardiology so that they will be able to undertake any work requested of them lest it fall into the hands either of restricted specialists as the work in tuberculosis is at the present time or into the hands of a lay body as is the situation in Ohio presently, in which the medical profession is entirely ignored.

We believe that at the present time as the Heart Committee is organized, and with a spirit of *rapport* between the State Medical Society and the Public Health Association, much can be achieved on the one hand in bringing about a higher standard in the knowledge of cardiology among the practitioners in the state and on the other hand prevent an abuse that might tend ultimately to cleave out another large segment of practice from the general practitioner.

As a result of this educational program there have been five discussions on a cardiologic subject in various sections of the state as a part of the Colloquium course sponsored by the committee of Medical Education under Dr. N. O. Pearce, namely at Wadena, Willmar, Faribault, Brainerd and Winona. The St. Louis County Medical Society devotes ten minutes of every monthly meeting to a consideration of cardiologic subjects and a circular letter written to the secretaries of the component societies of the state urging this plan has elicited a favorable response from several. It is suggested that this movement be continued and that other sections of the state take up the Colloquium course in order to foster the educational work within the profession. At the present time the Hennepin County Medical Society has a County Heart Committee which works in conjunction with the Minnesota Public Health Association in promoting occupational placement of chronic cardiopaths and in the establishment of cardiologic clinics and has prepared an excellent course on cardiology which was given at thirteen successive noon meetings of the Hennepin County Medical Society at their club rooms. It is further proposed this next year, beginning in the fall, to have a series of articles in MINNESOTA MEDICINE, permission for which has been tentatively granted by Dr. C. B. Drake, giving a serial, comprehensive outline of cardiology for educational purposes in the profession and for the standardization and classification of vital statistics on that phase of practice.

F. A. WILLIUS — A. D. HOIDALE
H. E. RICHARDSON — D. P. HEAD
H. J. LLOYD — F. J. HIRSCHBOECK, *Chairman*

A motion was made and carried that the report be accepted.

PRESIDENT BOYER: Gentlemen, the American Heart Association some time ago took up the matter of heart study and heart education, seeking to disseminate knowledge of heart disease among the public. It becomes incumbent upon us as the profession to see that we ourselves are better informed on this matter than the public. This report should be published in MINNESOTA MEDICINE—not only that, but the report should be sent as a letter to every member of the State Society.

The Reference Committee.

DR. MANLEY: The report of the Committee on State Health Relations, Dr. Sweetser, Chairman.

REPORT OF THE COMMITTEE ON STATE HEALTH RELATIONS

Up to June 1, one stated meeting was held and there were numerous informal meetings of parts of the Committee. Contact has been maintained with the State Board of Health and other tax-supported health agencies and with the Committee on Public Health Education. Various letters referred to the Committee from the State Board of Health have been cared for on the principle that the work of preventive medicine should be done as much as possible by physicians as part of the private practice of medicine, and that the conditions governing any coöperative medical work should be determined by the local county or district medical society.

Last year, at the instance of your Committee, the House of Delegates recommended that each local Medical Society set up a scale of fees for public health work. We are trying to find out the present status in that regard.

Last year the Committee supported the previous recommendation of the Committee on Public Health Education that each local society establish a public welfare committee to maintain contact with and influence the medical policies of various local health agencies. We are trying to find out which local medical societies have such committees.

The Committee has endeavored through the year to help where possible in the campaign for immunization against diphtheria.

THEODORE H. SWEETSER, M.D., *Chairman.*

DR. MANLEY: This is one of the most important committees in the Society and they have done a great deal of work. The Reference Committee recommends the adoption of this report, and would ask the delegates if they can make any answer or report on two questions which this committee brought up last year: First, have any local medical societies set up a scale of fees for public health work? Second, has each local society a public welfare committee to maintain contact with and influence the medical policies of various public health agencies?

Motion was made and carried that the report be adopted.

DR. SWEETSER (Minneapolis): Last year, on the basis of the report of the Committee on State Health Relations, the House of Delegates recommended that each

local society (1) adopt a scale of fees for officiai public health work done by its members, and (2) appoint a public welfare committee to maintain contact with and influence the medical policies of the various official and unofficial local health agencies. We have recently asked the Secretaries of the local societies as to what action has been taken. Twenty out of the thirty-four Secretaries replied in each instance that nothing has been done. I hope that, when you go home, you will do your best to have some action taken, as I feel that both these matters are of importance.

The public is very much interested, as you all know, in matters of public and personal health. Requests have repeatedly been sent to the State Board of Health requesting wholesale vaccinations and diphtheria inoculations. Dr. Chesley has referred these requests to us and the people have been advised to make arrangements with their local physicians individually or through their County Medical Society. One such request gave evidence that the writer wished the State Board of Health rather than the private physician to do the work in order to get something for nothing. In another instance, however, it was evident that some coöperative work by the physicians of a District Medical Society would be necessary if the work were to be done as part of the private practice of medicine. It seems to me that everyone in the private practice of medicine must take a more active interest in community health matters if such matters are to be kept within the scope of private practice and not forced into the hands of the official and unofficial health agencies.

PRESIDENT BOYER: Is there any further discussion of the question of the work of Dr. Sweetser's committee?

The Reference Committee.

DR. MANLEY: The next is the report of the most important committee of the whole society, the Committee on Public Policy and Legislation. The chairman of this committee, Dr. Johnson. requests that he be allowed to give his report orally.

DR. JOHNSON (Dawson): We have had a great deal of trouble with national legislation this year, not that we have made so much noise about it, but there is one thing after another. You might class them under the heading of the Sheppard-Towner legislation and the narcotic bills. We have wired and written our different congressmen about these bills. We got Dr. Wright, on his way East, to go to Washington to see the Minnesota congressmen in regard to them. Under the bills introduced The Children's Bureau would have taken the control right out of the hands of the state and would have given all authority to some Laymen's Bureau in Washington, who would be absolutely independent of any medical organization, and State Board of Health, or the United States Public Health Service. If this is going to be handled at all in a national way, it should be handled through our Public Health Service at Washington. In spite of our best efforts, these paid-up lefters will probably keep at it until they get some kind of a bill through Congress.

The next thing is the narcotic bills. There have been two or three different types of them. One bill would have given absolute control to some bureau in Washington and they would have been responsible to no one. For any infraction of their regulations, they could revoke our license to practice medicine and we would have to go to Washington to fight it. This was a hard fight and a great deal of effort was spent in defeating it.

Dr. Wright introduced a resolution in the House of Delegates of the American Medical Association which provided that the Board of Trustees appoint a committee of five to study national legislation. Dr. Braasch, as a member of the committee to which this resolution was referred, did a great deal to secure for it a recommendation to pass. I appeared before the committee in behalf of the resolution and did what little I could to get it passed. It was finally enacted by the House of Delegates and such a committee will now be appointed. The Board of Trustees is very conservative, it seems to us, when it comes to expending money for national legislation. We feel that they are not spending enough money down there and that congressmen don't know everything about these bills. The committee appointed by the Board of Trustees are to report to the next House of Delegates and also to the Board of Trustees such recommendations as they think necessary. Right there in Washington is where the trouble to our profession is coming from in the way of state and social medicine, and that is where it must be fought out. Washington is filled with lobbyists, who are often financed by well-meaning, but misinformed and misguided individuals.

Next take the Veterans' bill. I don't know how many bills have been introduced, but the House of Delegates of the American Medical Association passed a resolution asking the president to veto the Veterans' bill, which he did. Even against this there was a fight in the House of Delegates as some were afraid of offending some one, but finally they came to the conclusion that if they wanted anything they would have to ask for it and fight for it if necessary. By the time we got through, I am sure they all understood what the Minnesota delegation stood for. The resolution went through in fine shape. One of the doctors in charge of an army hospital said that out of six hundred beds in the hospital, eighty-five per cent were occupied by people whose disease had no service connection. If it keeps on as it has and they want more and more Veterans' hospitals, the time will come when these veterans are not going to be hospitalized all the time and these hospitals will be empty. The government is not going to have them empty and some use will be made of them, probably in the line of state and social medicine. It surely will be an opening wedge for some form of state medicine. We are not opposed to taking care of the man who is entitled to it, but we don't believe in treating diseases with no service connection in government hospitals. It was brought up in the House of Delegates that we should work for some system in coöperation with the government, whereby instead of the government building so many hospitals that the veterans be treated in their home cities in the local hospitals, but the government would pay for the hospitalization and medical services.

Don't forget the American Medical Association, because if there ever was a need for organized medicine sticking together, it was never more necessary than it is now. I really feel that the day may come when we would be glad to pay a hundred dollars a year as dues to the American Medical Association and state associations, if by so doing we can stop the trend of things from drifting the way they are now doing.

In regard to our own state, I feel that if we continue to stay active and well-organized as we have in the past few years we can take care of things here. We likely will have problems to fight as usual at the next session. The thing to do is to be ready for them when they come, and be constantly on the job. If we aren't, they certainly will take advantage of the opportunity to pass new quack bills and to repeal legislation passed the last few years.

In closing I want to say that the efficiency of our state organization is, in a large measure, due to our far-seeing and broad-minded councilors and our active president and hard-working committees. Last, but not least, to our own active and able secretary, Dr. Meyerding. What Dr. West is to the American Medical Association, Dr. Meyerding is to our organization. We know that other organizations are offering him greater opportunities and more of a financial reward than he is getting here. We hope he will not leave us, but will stay here. It would be a hard blow to our state association if we should be deprived of his valuable services.

PRESIDENT BOYER: We will hear from Mr. Brist.

MR. BRIST (St. Paul): We have run across two or three things in this state with reference to getting after quacks. The first thing is the naturopath. I started after one in the northern part of the state some time ago, told him who I was and asked to see his Basic Science Certificate. He said he didn't have it. He was a graduate chiropractor from the school of Davenport, and couldn't get a license because he couldn't pass the examination, but belonged to the Naturopathic Society. He was supposed to pay $25.00 but they had been assessed an extra $200.00 every year for the legislature. He said, "Furthermore, I understand there is an agreement with the Medical Board that we will not be prosecuted." He gave me the man's name and I told him he had better go back to his lawyer and find out about the four we had convicted. He said, "We felt you would get tired of fighting us and grant Basic Science Certificates to those of us who were in the state." I told him the chances were very slim, as legislation along this line was very carefully watched by the medical profession and the public. I said I would come back in thirty days and if he was still there he would be arrested for practicing without a license. He said he was going back to Winnipeg.

There is another class of people in Minnesota. There are only six of them that I know of so far who call themselves napropaths. They are from a school in Chicago. One of them is under arrest in this town now. The definition means, "That branch of medicine which attributes disease and disorders to an improper condition and functioning of the ligaments and connecting tissue." Since they returned from their convention in Chicago they have taken down their signs from their doors. One has refused to do it, and the Medical Board has served notice on him to appear next week and show cause why his license should not be revoked. He said Clarence Darrow was their attorney and would take care of the case. Dr. Weiser and Dr. Adson are here to talk to you about the attitude of the Board. I feel safe in saying that the Medical Board intends to prosecute these fellows, and we have received wonderful coöperation from the Medical Association of this state. We had a fellow prosecuted in New Ulm last week for doing what we call bleeding and cupping. He charged one person $70.00 for it. He was fined $500.00.

A large number of people write to Dr. Meyerding, and we try to get right behind them and go after them. The medical profession is interested in this problem, and yet the Board cannot do much if the Legislature amends the laws so as to take the teeth out of them.

I want to assure you on behalf of the Medical Board that as long as we have your support we will prosecute the quacks of this state.

PRESIDENT BOYER: We will now hear from Dr. Weiser.

DR. WEISER (New Ulm): I think we are very fortunate in having such an aggressive supporter as Mr. Brist, and in the majority of instances we have been very successful. Mr. Brist does not prosecute these illegal practitioners without first making a very thorough investigation, so all the prosecutions have been successful.

DR. ADSON (Rochester): The Board of Examiners coöperates with us in every manner and they have been making an attempt to keep the expenses down, reasonable with the effort accomplished.

DR. MANLEY: I move the adoption of the report of Dr. Johnson.

Motion was seconded and the report adopted.

PRESIDENT BOYER: The Reference Committee.

DR. MANLEY: The report of the Committee on Medico-Legal Affairs.

REPORT OF COMMITTEE ON MEDICO-LEGAL AFFAIRS

The Committee on Medico-Legal affairs has held no definite meeting except that its members were present at the general Committee meeting held by Dr. Boyer, in Minneapolis, February 10, 1930.

It has been the belief of the Committee on Medico-Legal affairs that the time is ripe in the State of Minnesota for some constructive legislation along the lines of expert testimony, particularly with reference to the mental status of criminals being brought to trial. It has been felt desirable to have the initiation of such legislation as in the State of Massachusetts, whereby the matter of sanity of criminals is not brought before a Jury for decison, but is determined by a Commission or Board appointed for that purpose, and that the matter of the sanity of the criminal should never be left

to a lay jury to determine. In view of the fact that this involves an amendment to the Constitution of the State of Minnesota, it is impossible to make any rapid progress in the enactment of such legislation. It is felt by this Committee that such legislation should primarily be enacted through the legal profession, with the moral support of the medical profession of the State. No definite work has been done in regard to this except informal inquiries of members of the Bar Association. We cannot report progress in this matter, but merely outline what we believe to be a policy for constructive legislation in this State.

There was referred to this Committee a communication from Margaret Sanger, of New York City, requesting endorsement of a bill to be introduced in Congress to amend the penal laws concerning birth control. It is the recommendation of this Committee, by a vote of four to one, that the House of Delegates do not endorse this bill.

There has been in the hands of this Committee, also, for consideration, another matter relative to one member of the State Medical Association, which matter is still in the process of investigation and upon which, at this time, the Committee is not ready to make a report.

Other than this, this Committee has no activity to report.

W. H. HENGSTLER, M.D., *Chairman.*

PROPOSED AMENDMENTS TO SECTIONS 334 AND 396 OF TITLE 18 OF THE UNITED STATES CODE AND SECTION 135 OF TITLE 19 OF THE UNITED STATES CODE

Section 211 Penal Laws is Section 334 United States Code.

Section 245 Penal Laws is Section 396 United States Code.

Sections 311 and 312 Penal Laws are Sections 511 and 512 U. S. Code.

Section 305a Tariff Act 1922 is Section 135 of Title 19 U. S. Code.

The Provisions of this Section shall not apply

(1) to information relating to the prevention of conception published either within or without the United States by a governmental agency, medical society, medical school, medical college or medical journal, or reprinted by any individual or organization after such publication, or

(2) to information relating to the prevention of conception sent by a licensed physician, hospital or clinic to another licensed physician, hospital or clinic or to a patient, or

(3) to information regarding the names and addresses of licensed physicians, hospitals and clinics in the State of destination which give advice relating to prevention of conception, or

(4) to any article, substance, drug, medicine or thing for the prevention of conception sent from within or without the United States to a bona fide wholesale or retail dealer in medical supplies or a licensed physician, hospital or clinic, or sent by a licensed physician to a patient.

Dr. MANLEY: The Reference Committee recommends the adoption of this report and concurs in the recommendation of this committee that the House of Delegates do not endorse the bill sponsored by Margaret Sanger of New York City, amending the penal laws concerning birth control.

DR. HAMMES (St. Paul): The Medico-Legal Committee felt that some ways or means should be devised by which attention would be brought to the Legislature through the Bar Association in changing the laws in some way that this can be done. At the last meeting of the American Medical Association this same matter came up before the Committee on Nervous and Mental Diseases. A resolution which covered this matter was adopted, the resolution being as follows:

"RESOLVED, That the Section on Nervous and Mental Diseases hereby declares its adherence to the principles stated in the Report of the Committee on Psychiatric Jurisprudence, Section on Criminal Law and Criminology, American Bar Association, and approved by that association at its meeting held in Memphis, Tenn., Oct. 24, 1929, namely:

"1. That there be available to every criminal and juvenile court a psychiatric service to assist the court in the disposition of offenders.

"2. That no criminal be sentenced for any felony in any case in which the judge has any discretion as to the sentence until there be filed as a part of the record a psychiatric report.

"3. That there be a psychiatric service available to every penal and correctional institution.

"4. That there be a psychiatric report on every prisoner convicted of a felony before he is released.

"5. That there be established in each state a complete system of administrative transfer and parole, and that there be no decision for or against any parole or any transfer from one institution to another, without a psychiatric report.

"RESOLVED, Further, that the section recommends that the House of Delegates of the American Medical Association adopt the principles stated above and request the Board of Trustees to take such action as may be necessary to bring about the coöperation of state and county medical associations with corresponding state and local bar associations in securing, as far as possible, the adoption of these principles in practice."

I think the fourth and fifth are the most important. I want briefly to cite two cases to show the kinds of such cases. Some years ago a discharged soldier conceived the idea that I was attempting to prevent him from obtaining his compensation. His attitude was quite threatening but quite normal. One day he dropped into Red Cross headquarters and told them he was trying to get me but that I was protected by the Democratic Government and he couldn't get at me, but he could get my wife and children. He described my home; and I took it up with the Probate Court and he was, after four hours of examination, found to have delusions. If the police had handled this case he probably would have got thirty or sixty days in jail and been released.

The second case was one we had last week before Probate Court. It was this man's third robbery, and here he was simply an accomplice. He waited about

a block away from his uncle's home while the other man robbed it, and the only reason he could assign was that this man was a friend of his. This man's intelligence quotient was 61. We recommended to the court that he be sent to Faribault. If this examination had not been made he would have received thirty or sixty days or a year and been out again.

The report was adopted by a vote.

The Reference Committee will proceed.

DR. MANLEY: Report of the Committee on Schools for Laboratory Technicians, Dr. A. G. Schulze, Chairman.

REPORT OF THE COMMITTEE ON SCHOOLS FOR LABORATORY TECHNICIANS

This Committee began its investigation by sending a postal card questionnaire to each of the 44 class "A" hospitals in the State of Minnesota as well as to the various medical clinics in the State.

From the answers received we learned that training of medical technicians is being carried on in thirteen of these hospitals and clinics, which number, added to the three commercial institutions which are in existence, makes a total of sixteen places, practically all located in the Twin Cities, where the training of medical technicians is being carried on.

A second questionnaire was mailed to these sixteen institutions and a reply was received from twelve of them. An analysis of these twelve replies forms the basis of our report.

The following replied:

St. Mary's Hospital, Duluth
Minneapolis General Hospital, Minneapolis
Northwestern Hospital, Minneapolis
Swedish Hospital, Minneapolis
University Hospital, Minneapolis
Ancker Hospital, St. Paul
Charles T. Miller Hospital, St. Paul
St. Joseph's Hospital, St. Paul
St. Luke's Hospital, St. Paul
St. Paul Clinic, St. Paul
N. W. Institute of Medical Technology, Minneapolis
Physicians' Clinical Laboratory, St. Paul

The following did not reply—

Asbury Hospital, Minneapolis (does not teach technology)
St. John's Hospital, St. Paul (report received late)
Professional Service Bureau, Minneapolis (did not report)
Mayo Clinic, Rochester (does not teach technology)

Degree of Director.—In all of these institutions, with the exception of a single clinic, the director holds the degree of "Doctor of Medicine," while in the single exception stated the degree of "B.S." is held.

Length of Course.—Three of the institutions give a six months course (this is the shortest); one school offers an eight months course; two schools offer a nine months course; five schools offer a twelve months course, while the course at the University Medical School covers four years.

Entrance Requirements.—The minimum entrance requirements in nine of the schools is a high school education; in two it is high school education or degree of registered nurse; while one school requires a college graduation.

Certificates Awarded.—There is only one school that does not award a diploma or certificate of some kind at the end of the course.

Source of Teaching Material.—One of these schools being connected with a clinic it is very obvious that the teaching material and specimens for teaching purposes are obtained through the work of the members of that clinic. Nine of the schools are connected directly and physically with hospitals and the pathological specimens and resources of those hospitals are used for teaching material for the student technicians. Two of the institutions are purely commercial and are not connected directly with any hospital but claim to be supplied with teaching material from various sources. For instance, the N. W. Institute of Medical Technology claims to receive material from the U. S. Veterans' Hospital, the State Board of Health and various practicing physicians. Another institution claims to receive material from hospitals, physicians and the St. Paul Board of Health.

Further investigation reveals the fact that the U. S. Veterans' Hospital is supplying some specimens to the N. W. Institute of Medical Technology and the State Board of Health has also supplied some cultures in the past and the St. Paul City Laboratory has also coöperated to some extent with the second institution but both of these laboratories are questioning the wisdom of this association, and will no doubt discontinue it.

We doubt whether any hospitals are supplying any material to these institutions for teaching purposes.

Students, Fees and Advertising.—These twelve institutions can very readily be divided into three groups. In the first group we have the University Medical School only. It has a class of 80 students, charges $40 per quarter and the course is four years long. There is no advertising program carried on beyond that which is carried on by the General University.

In the second group of schools we have those connected with the various hospitals. The number of pupils in their classes runs from one or two, to two, four, six and eight; rather small classes. Five of these schools charge no fees at all; three charge $50 and give the books, some meals and laundry. Another school charges a fee of $100 but makes no mention of books, meals, etc. None of these schools carry on any advertising.

In the third group are the so-called commercial institutions. One of the schools included in this report has a class of fifteen students, charges $215 for a six months course and carries on an advertising program by means of letters and advertisements in the local papers. The other commercial school charges $250 for a six months course, claims to have accommodations for 104 students and carries on a remarkable advertising program by means of catalogues and follow-up letters.

Method of Teaching.—The most important part of this survey and report pertains to the actual method of instruction which is employed, but on this point it is difficult to get full detailed information.

There can be no doubt that the four year course at the University Medical School under the directorship of Dr. Wm. A. O'Brien and his corps of technician supervisors, all of whom have a degree of "B.S." or "M.S.," is a good course and that the instruction is thorough. The greatest objection to this course, as voiced by prospective students, is the long four year period.

The courses given in the various hospitals where the laboratory material is practically without limit, where the classes are small, where the instruction is carried on by personal contact and supervision on the part of whole time trained technicians, are excellent courses and quite beyond criticism. But, the classes are so small, the waiting list is so long, that the prospective student becomes discouraged and looks elsewhere.

The commercial institutions, therefore, with their advertising program and promises of excellent positions, become attractive. How plentiful is their teaching material when they are not intimately or actually connected with a hospital? How thorough is the instruction in a short six months course when the actual teaching staff of whole time trained instructors is obviously too small for the number of students enrolled? A long, imposing list of subjects taught and apparently many didactic and laboratory hours devoted to them may mean nothing when the method of instruction is considered. There is a vast difference between lectures by part time men and the constant personal and direct instruction and supervision of full time trained technicians.

It is to be regretted that here in the State of Minnesota we have no laws governing or controlling the activities of Schools of Medical Technology or other similar schools; so there is practically no limit as to what may be done and still remain within the law. The creation of such laws may well be considered by our Committee on Legislation.

However, the Registry of Technicians of the American Society of Clinical Pathologists requires the following minimum preparation and qualifications:

(a) Graduation from an accredited high school.
(b) One year of didactic work in basic sciences, including chemistry, bacteriology, physiology and pathology, together with laboratory demonstrastratic or its equivalent.
(c) Six months of actual experience in a recognized clinical research or public health laboratory.

It certainly is not unreasonable to expect all institutions teaching medical technology to have a standard of minimum requirements for graduation which will enable its graduates to register with the American Society of Clinical Pathologists.

Certainly no institution teaching medical technology can expect to have the endorsement of organized medicine that does not have at its head a director who has the title of "M.D." or whose teachers are not registered technicians; that has not sufficient physical equipment to properly carry on this work and is not actually connected with a hospital; whose course is not at least twelve months, or that is openly commercial or carries on pernicious advertising.

What should be the attitude of the various component societies of the Minnesota State Medical Association towards those of its members who lend their name and their title as instructors which do not meet with the above requirements? One county society demanded of its member that he either give up his teaching position or resign his membership.

Another School of Medical Technology, which might be classed as a commercial concern, returned its questionnaire too late to be included in the above listing, but the answers submitted are as follows:

The Director of the School has the title of "M.D." but he evidently does none of the instructing. They offer a six months course, call for high school requirements and issue a certificate when the work is completed.

Their teaching material comes from the hospital in which the school is located and from the U. S. V. Hospital. They have a class of 24 students and charge $40 per month but it is plain that all the teaching is done by one technician.

They also offer a two months course in X-ray technic, physiotherapy and basal metabolism for $125, accommodating 15 students, but here again all this teaching is done by a single instructor who has prepared himself along these lines.

This school is contemplating substantial improvement by the middle of July.

DR. MANLEY: This is a very excellent report and the committee has investigated most of the technology schools in Minnesota. There are many things in this report that demand careful consideration.

The Reference Committee recommends that the report be referred to the Council, with particular reference, first, to any new legislation, and, second, to discipline the members of the Society who lend their names to sub-standard schools, and, third, the appointment of a local member of the National Registry of Technicians to the State Committee.

We recommend the acceptance of this report, and feel that the committee should be continued.

DR. SCHULZE (St. Paul): I regret very much that the questionnaires the committee sent out were not received in time so this report could go to the hands of the delegates. There are one or two important parts of this report. One of these schools being connected with a clinic, it is very obvious that the teaching material and specimens for teaching purposes are obtained through the work of the members of that clinic. Nine of the schools are connected directly and physically with hospitals and the pathological specimens and resources of those hospitals are used for teaching material for the student technicians. Two of the institutions are purely commercial and are not connected directly with any hospital but claim to be supplied with teaching material from various sources. For instance, the Northwest Institute of Medical Technology claims to receive material from the United States Veterans' Hospital, the

State Board of Health and various practicing physicians. Another institution claims to receive material from hospitals, physicians and the St. Paul Board of Health.

Upon a vote the report was adopted.

DR. MANLEY: I move that this matter be referred to the Council for further study.

This motion was seconded and carried.

PRESIDENT BOYER: The Reference Committee.

DR. MANLEY: Report of the Committee on Public Health Nursing, Dr. C. B. Wright, Chairman.

REPORT OF THE COMMITTEE ON PUBLIC HEALTH NURSING

This Committee has had six meetings, November 29, December 5, December 18, December 30, 1929, and January 23, and June 4, 1930.

At these meetings were the Chairman, one or two other members of the Committee, also the Director of the Public Health Nurses, University of Minnesota; Director of Visiting Nurses of Minneapolis, Superintendent of Public Health Nursing, State Department of Health; a physician active in public health work, a rural nurse and lay member of a rural nursing committee. These meetings grew out of a conversation which your Chairman had with Miss Fox, representing the National Public Health Nursing organization, and later with Miss Olivia Peterson of the Division of Child Hygiene, University of Minnesota.

There are in Minnesota public nurses employed by, and responsible to, various agencies such as Child and Maternal Hygiene Nurses, School Nurses, Tuberculosis Nurses, Red Cross Nurses and County Nurses, who are employed by local school boards, Red Cross, county commissioners, State Board of Health, and these nurses are working, in many instances, with entirely inadequate supervision. It was felt that some mechanism should be instituted for better medical supervision of their work and to have certain rules and regulations drawn up that nurses may follow in emergencies until proper medical assistance can be secured.

Consequently, a set of emergency rules and regulations were drawn up and have the indorsement of this Committee. A copy of these rules will be sent to every member of the House of Delegates for their consideration and correction, and, if satisfactory, for their approval. It was also recommended that a medical advisory group be organized, consisting of members of the State Medical Association outside of the three larger cities, to advise with the state nursing organizations and it is also recommended that a similar committee be appointed from each county society, outside of the three larger cities, to act as a Medical Advisory Board to nurses working in their respective districts.

Respectfully submitted by the Committee on Public Health Nursing,

DR. W. H. CONDIT
DR. J. T. CHRISTISON
DR. GEORGE EARL
DR. C. B. WRIGHT, *Chairman*

SUGGESTED POLICIES AND STANDING ORDERS FOR PUBLIC HEALTH NURSES

We have in Minnesota many nurses doing various types of public health work, some of whom are working with mothers and babies; others in schools; some in communities whose chief interest is in the control of some particular disease, such as tuberculosis; still others have developed programs to fit some particular health need.

These nurses are employed by various agencies, such as local school boards, county commissioners, Red Cross chapters, etc. The machinery for medical supervision is available in the Nursing Advisory Committee, as the law specifies that a doctor should be a member of this committee. In many instances, however, this has not provided satisfactory medical supervision for public health nursing services. Nurses also make monthly reports to the Superintendent of Public Health Nursing in the State Department of Health, and may receive upon request advisory service from the same source.

A committee from the State Medical Association, appointed by the President of the Councillors, is working with a committee, appointed by the State Organization for Public Health Nursing, comprised of the Director of the Public Health Nursing Course, University of Minnesota; the Director, Minneapolis Visiting Nurse Association; the Superintendent of Public Health Nursing, State Department of Health; a physician active in public health work; a rural nurse; and a lay member of a rural nursing committee. This committee feels an effort should be made to have more medical supervision of health programs as carried on in these local communities, and to have certain rules and regulations drawn up which the nurses may follow in the various types of work in which they are engaged.

After several meetings of this committee, some suggestive general rules and standing orders have been drawn up governing public health nursing. These are presented for your consideration.

1. Any agency employing public health nurses shall have its program approved by the local organized medical group.

2. Nursing care should be continued, after the first visit, only under the direction of a licensed physician.

3. The nurse shall not recommend the selection of any individual physician. Free medical care found necessary after careful consideration of economic condition of patient may be provided for either through a volunteer service of local physicians or through the use of facilities provided by the state and municipality with the approval of the family physician.

4. The nurse does not diagnose nor prescribe treatment. It is, however, her function to carry out the doctor's instructions. The local medical group should approve minimum routine standing orders (see list attached). Records of such nursing care should be kept on file by the nurse.

5. The establishment of clinics or other events which involve medical service should be undertaken only after consultation with the medical societies or local physicians.

6. Every public health nurse should understand and support regulations of the local and state health departments and shall keep in direct contact with their personnel.

7. Every nurse engaged in public health nursing should be eligible for certification in Minnesota as provided by law. See Sec. 4, Chapter 196—S.F. 495.

8. The work of every nursing agency should be carefully and consistently recorded and the nurse should give a report periodically to the person or group responsible for the service and to the State Department of Health as provided by law. See Sec. 5, Chapter 196—S.F. 495. (It is recommended that these reports be given publicity.)

STANDING ORDERS

Standing orders are those orders for treatment and medication which can be used until a physician can be secured or when orders have not been left by the attending physician. The following are examples of standing orders frequently used:

New Patients.—General or partial care as the situation indicates. Instruct family in hygiene of the sick room and care of the patient until next visit. Explain continuance of nursing care depends upon attendance of physician.

Elevated Temperature.—Put patient to bed. Urge importance of quiet and rest. General isolation routine if communicable disease is suspected. Liquid diet. Plenty of water. Sponge for temperature of 102 to 105. If patient is suffering from abdominal pain, family should be instructed to give nothing by mouth, until patient has been seen by the physician.

For Infants and Children with Fever, Undiagnosed.—Normal salt flushing when required. Diet: Boiled water for twenty-four hours.

Sore Throats and Colds.—Isolation. Plenty of water. Liquid diet. Urge medical attention.

For Discharging Ears.—Cleanse the outer ear with moist boric solution swabs. Dry thoroughly. Do not irrigate. Emphasize need of prompt medical attention.

Ulcers (Chronic).—Cleanse with normal salt or boric solution. Apply hot dressings of either solution and a firm bandage.

For Dressing, Minor.—Cuts, bruises, infected fingers, scratches. Apply mercurochrome, alcohol or tincture of iodine followed by alcohol direct to wound or abrasion. Cover with gauze or clean handkerchief. Advise medical observation in every case.

Emergencies and Accidents.—Communicate with physician. First aid treatment until medical aid is secured. If patient is a minor, communicate with parent immediately if possible.

Burns.—Always consider burns as serious injuries. Remove clothing, if possible, and if area of burn is extensive, remove patient to hospital as soon as possible. For first aid, if there is severe pain, apply vaseline, sweet oil, normal salt solution, or boric acid solution and advise calling physician.

Prenatal Cases.—Aim to bring patient under the care of her physician at once. Acquaint patient with the educational literature obtainable from the State Department of Health. Take temperature, pulse, respiration. If possible, bring a specimen of urine in to her physician unless this has been done recently or will be done soon by the patient. If the patient is to have a home delivery, help make up the necessary sterile supplies as advised by the Division of Child Hygiene in literature distributed by them. Call as often as needed to help the patient with her diet or any treatment ordered by the attending physician.

Obstetrical Cases.—For the mother, cleansing bath. Change pads. Perineal irrigation with ½% of lysol solution. Leave in warm, dry bed. For baby, oil and bathe. Sterile cord dressing. Keep warm. Every nurse is charged with the responsibility of being concerned with the protection of the eyes and the registration of the birth as provided for in the state law.

Post-Partum Hemorrhage.—Send someone else for physician immediately. Elevate foot of bed. Put patient in elevated Sims position. Keep patient quiet and warm. *No hot drinks.*

Puerperal Mother.—Cleansing bath. Local cleansing with antiseptic solution. Sterile dressing to breasts and vulva. Urge patient to go to physician for post-partum examination.

Nurses engaged in school nursing will often see abnormal skin conditions, inflamed eyes and symptoms which suggest the onset of communicable disease. Where it is difficult to get a doctor to assume responsibility, it is recommended that instructions be included in the standing orders indicating what the nurse is to do in these matters.

It is recommended that instructions endorsed by the Medical Association listing the symptoms which call for the exclusion of children from school and setting forth the procedure to be followed by the nurse in notifying the family, the family physician, etc. Such instructions, of course, must agree with the local and state laws and ordinances.

DR. MANLEY: This committee has drawn up rules governing the conduct of the various classes of public health nurses, and the Reference Committee believes that the House of Delegates should lend its support to these rules and to the work in general. We recommend that these rules be taken up before local societies and modified to meet local conditions.

We recommend the acceptance of this report.

Upon motion and vote the above report was accepted.

DR. MANLEY: Report of the Committee on Contract Practice, Dr. Webb, Chairman.

REPORT OF THE COMMITTEE ON CONTRACT PRACTICE

The Committee on Contract Practice held one meeting this year at the time of the general meeting held at the Leamington Hotel.

In last year's report it was stated that the Committee felt that the situation as to Contract Practice was satisfactory to all concerned and it was the sense of the Committee that it should confine its activities to consideration of complaints on Contract Practice as brought to its attention during the year.

As nothing further has been brought to the atten-

tion of this Committee, we have nothing further to report at this meeting.

It has been suggested that the name of the Committee be changed to Committee on Traumatic Surgery and Contract Practice.

R. C. WEBB, M.D., *Chairman.*

DR. MANLEY: Since there are no reasons for a change in name given in the report, the Reference Committee recommends the retention of the old name "Committee on Contract Practice," and asks for a full discussion of this matter by the House of Delegates, with two particularly important points in mind. First, the matter of efficient service to the patient, and, second, the matter of the development of an adequate and more or less uniform rate of compensation for the physician, bearing in mind the fact that some localities might advantageously have a different rate of compensation from another.

The Reference Committee recommends acceptance of this report, and feels that while a complete solution of this problem is very difficult, an attempt should be made to solve some of the more urgent problems.

Upon motion and vote the report was accepted.

PRESIDENT BOYER: The Reference Committee desires a discussion on the two points involved, the quality of service rendered and the compensation received. Dr. Collins, can you tell us about this?

DR. COLLINS (Duluth): Our committee has only had one meeting, as far as I know, and I wasn't present at that meeting. However, there is a very brief report that has been handed in which represents all the deliberations I am familiar with. There is very little we can do with regard to contract practice. There has been some discussion as to whether we should change our name to Committee on Traumatic Surgery.

DR. MANLEY: The report of the Committee on University Relations, Dr. S. H. Boyer, Chairman.

REPORT OF UNIVERSITY RELATIONS COMMITTEE

There has been no meeting of this committee thus far this year. There has been but one matter brought to the attention of the committee up to date. This is in relation to the distribution of radon seeds to the medical profession by the University of Minnesota.

It appears that a considerable number of doctors have desired to avail themselves of the use of radium emanations and, laboring under the impression that they could obtain emanations from the University, have learned upon request that they were mistaken. After discussing this subject by mail with members of the University Relations Committee, it was decided to ask Dean Lyon for an explanation. The dean replied, after he had made an investigation, that the amount of radon seeds available is not sufficient to permit of a uniform supply to the doctors of the State and that, therefore, no arrangements had been made with them. He explains further that occasionally a little is left over, but not regularly. The shortage of seeds upon the part of the University is due to the possession of a comparatively small amount of radium. It is hoped that the University will be able to find ways and means whereby it can increase its supply.

It is interesting to note that the only place in the United States from which radon seed may be obtained is the Standard Radium Corporation of America with offices in New York City. At one time this corporation maintained a branch office in Chicago, since closed. The Standard Radium Corporation of America represents the merging of all other concerns in this country which were in the radium business.

Very truly yours,

S. H. BOYER, M.D., *Chairman.*

PRESIDENT BOYER: When the radium plant was established at the University of Minnesota the feeling on the part of the profession was that the Minnesota profession would be able to receive radium emanations from that source. It was later given out by the head of the department that there were no radium emanations to spare, and because of this fact no arrangements had been made with the doctors of the state to supply them. He stated further that occasionally a little is left over, but not regularly, and that the shortage of seeds on their part is due to the possession of a comparatively small amount of radium. We hope the University will be able to find a way to increase its supply.

At the present time the Standard Radium Corporation of America with offices in New York controls the entire situation, and if you want any of these seeds you must obtain them from this company. I don't know what further can be done about it.

Upon a vote a motion to accept the report was carried.

DR. MANLEY: Report of the Committee on Military Affairs.

REPORT OF THE COMMITTEE ON MILITARY AFFAIRS

Resolution to be presented to the House of Delegates of the Minnesota State Medical Association by the Committee on Military Affairs:

WHEREAS, The present Army regulations require that every reserve officer shall, during each five years commission period, put in two hundred (200) hours military work, in camp, correspondence school, in active training meetings, or similar military activity, or else become ineligible for renewal of his commission with assignment to an Organized Reserve Unit, and therefore revert to the "Auxiliary Reserve" in time of peace, and

WHEREAS, There are many highly trained, highly skilled and very active physicians who, as reserve officers, have been assigned as chiefs and assistant chiefs of surgical, medical, laboratory, roentgen and other distinctly professional services in Organized Reserve Hospital Units, carrying very little administrative responsibility, and whose professional duties in busy private lives make them especially well fitted for their duties in their army assignments, but whose same duties make it practically impossible for them to carry on military work in time of peace, and

WHEREAS, Many of these men and their valuable attainments are being lost to the Organized Reserve,

although they are willing and anxious to serve in time of need and do not aspire to advancement in grade,

THEREFORE, be it resolved, that the Minnesota State Medical Association, desiring that the Medical Profession may be of the greatest service to our country, respectfully suggests that the service might be enhanced if the regulations were changed to provide for recommission and reassignment of chiefs and assistant chiefs of professional services of Hospital Units even though they have not completed the required amount of military work, and further,

Be it resolved, That a copy of this resolution be sent to the Surgeon and the Commanding General of the Seventh Corps Area, The Surgeon General, the Officer in charge of Reserve Affairs, the Adjutant General and The Chief of Staff of the United States Army.

RALPH T. KNIGHT, M.D., *Chairman.*

DR. MANLEY: The Reference Committee recommends the adoption of this report.

The report is voted upon and approved.

PRESIDENT BOYER: There are some communications to be acted upon at this time.

DR. MANLEY: This is a communication from the Inter-State Post-Graduate Medical Association of North America, officially inviting this Society to attend their meeting in Minneapolis October 20th to 24th. I move that the Secretary acknowledge the invitation with thanks.

This motion was carried.

DR. MANLEY: This is a communication from the Minnesota Department of Health relative to their work in connection with maternal mortality.

MINNESOTA DEPARTMENT OF HEALTH

To the House of Delegates,
Minnesota State Medical Association:

As reported in the letter of June 30 to your Secretary and to your President, the study of the maternal mortality conditions in Minnesota undertaken by the Division of Child Hygiene of the State Department of Health in coöperation with the Federal Children's Bureau is sponsored by this body. The results of the investigations carried on in Minnesota are now in the hands of the statisticians of the Children's Bureau. Owing to the press of work of statistical material demanded by the White House Conference they have been delayed in completing this maternal mortality study. It will, howver, be available sometime within the next few months. In the meantime, this very brief statement regarding the Minnesota maternal deaths may be made:

MATERNAL DEATH RATES

Year	*Minneapolis*	*St. Paul*	*Duluth*	*State*
1928.....	5.63	6.61	8.22	5.25
1929.....	4.40	4.46	4.16	4.27

In addition we wish to mention at this time the extremely coöperative and helpful manner in which the physicians throughout the state received the representative of the Board who carried on this study. The doctors' records were always placed at his disposal and such additional information as either the doctor or the hospital could furnish was always made available to our representative. We feel that this helpful and cooperative spirit in connection with this study is perhaps a conspicuous factor in explaining why Minnesota stands so high in the matter of its maternal and also of its infant mortality rates.

DR. MANLEY: The Reference Committee commends the work being done by the Minnesota Health Department and believes that during the course of years statistics will be available which will be of great practical value.

I move the acceptance of the communication.

Motion was seconded and carried.

DR. MANLEY: This is a new resolution, of which the delegates have not had a copy, presented by the Hennepin County Medical Society. The following resolution was adopted at a meeting of the Executive Committee of the Hennepin County Medical Society on February 28, 1930, and was passed by the Society. The Executive Committee recommends that the delegates of the Hennepin County Medical Society be instructed to present the following resolution:

"That a committee of five be appointed by the President to make a careful study of the policies of the State Medical Association, particularly along the lines of the consideration of the problems and development of the County Societies, of redistricting of the Association, accumulation of reserve fund, the organization of permanent committees and changes in the personnel or the duties of the executive officers, and to make such recommendations as they deem advisable for the best interests of the Association and the component Societies."

The recommendations to be presented at the House of Delegates at the 1931 meeting.

The Reference Committee has approved this resolution, and I move its adoption.

DR. SAVAGE (St. Paul): It seems to me that this matter should first go before the Council rather than be referred to the House of Delegates. The Council is probably more familiar than any similar number of men with the various problems which confront the State Medical Association, and of course the function of this committee is the job of the Council. I don't think there is any objection at all to a study being made of the activities of the State Association, but I do feel that this report should be submitted to the Council for their opinion.

PRESIDENT BOYER: Will you submit that as an amendment to the original motion?

DR. SAVAGE: I offer that as an amendment.

DR. MANLEY: I accept it.

The motion was then voted upon and carried.

PRESIDENT BOYER: Applications have been received from the following for associate membership in the Association: Thomas G. Lee, Minneapolis; John F. Noble, St. Paul; Donald Smelzer, Philadelphia.

Motion was made, seconded and carried that the above mentioned applications be approved.

DR. MANLEY: This is a resolution presented by the Hennepin County Medical Society having to do with the recognition of Dr. Farr's work. This resolution

was presented before the Minneapolis Surgical Society on March 6, 1930. It is as follows:

"The recent enthusiasm over various forms of anesthesia other than those in use fifteen or twenty years ago make it evident that anesthesia of that time was not all that could be desired. Recent information has taught us beyond doubt that our surgical mortality has been reduced by the introduction of some of the newer types of anesthesia.

"By his untiring efforts, patience and persistence, Dr. Robert Emmett Farr, a member of this organization, has perhaps done more than any other man to bring about the widespread dissatisfaction with the general use of the old form of anesthesia.

"By his skillful administration of local anesthesia and his extensive writings and demonstrations thereon, he has convinced the medical profession that at least in certain types of surgery lives can be saved by substituting this method for those generally accepted by surgeons of the past.

"Therefore, be it resolved, that because of his contribution to surgery, his service to mankind, his part in the preserving of human lives, Robert Emmett Farr, one of our esteemed members, be recommended by the Minnesota State Medical Association to the committee as a recipient of the next annual Nobel Prize."

The Reference Committee recommends the adoption of this resolution.

The resolution was voted upon and adopted.

DR. MEYERDING: The following is a petition received from resident physicians of Dakota County:

"We, the undersigned physicians, residents of Dakota County, hereby petition the House of Delegates to grant a charter to the Dakota County Medical Society.

G. F. WALTER, Farmington,
T. J. GAFFNEY, Lakeville,
J. A. SANFORD, Farmington,
W. T. HAGERTY, Cannon Falls,
L. D. PECK, Hastings,
H. A. FASBENDER, Hastings,
L. R. PECK, Hastings."

DR. SAVAGE: I move that the House of Delegates recommend the granting of a charter to the Dakota County Medical Society.

This motion was seconded and carried.

DR. MEYERDING: Here is a petition presented by the Camp Release District Medical Society:

"Will the House of Delegates request the different committees to have their reports in at a definite time and mailed to the different societies; the idea being to get action from the component organizations in time to take it to the annual meetings?"

The Secretary endorses this communication from the Camp Release District Medical Society. The Secretary's office mails this material as soon as possible to those authorized to see it, as they can testify. It was necessary to send three different sets of material to the delegates when one should have been sufficient.

This recommendation was approved.

PRESIDENT BOYER: Is there any new business to come before this meeting?

DR. MEYERDING: I would like to announce that the Council will meet here twenty minutes after adjournment of this meeting.

PRESIDENT BOYER: We will meet here tomorrow at 2:00 P. M.

Motion was made, seconded and carried that the meeting adjourn.

The meeting adjourned at five-fifteen o'clock.

SECOND MEETING OF THE HOUSE OF DELEGATES

The second meeting of the House of Delegates, held in the English Room of the Duluth Hotel, Duluth Minnesota, in conjunction with the Sixty-second Annual Session of the Minnesota State Medical Association, July 14-16, 1930, convened at two-ten o'clock, July 15, Dr. S. H. Boyer, President, presiding.

PRESIDENT BOYER: Gentlemen, come to order, please. We will have the roll call.

Secretary Meyerding called the roll.

PRESIDENT BOYER: All those whose names have not been called, stand.

PRESIDENT BOYER: Supplementary report of the Credentials Committee.

SECRETARY MEYERDING: Are you ready, Dr. Boleyn, with your Credentials Committee report?

DR. E. S. BOLEYN: Fifty-six.

PRESIDENT BOYER: Summary of the minutes of the preceding meeting.

Secretary Meyerding read the minutes.

PRESIDENT BOYER: You have heard the report, gentlemen. Are there any corrections?

DR. ALBERT G. SCHULZE (St. Paul): On the report of Dr. Manley's Reference Committee on the report of the Historical Committee no mention was made of changing the date of the organization, 1853.

SECRETARY MEYERDING: That is just a synopsis. That will be in the regular minutes. The reporter made a very brief synopsis.

DR. S. H. BAXTER (Minneapolis): This may be in the nature of new business, but it relates to one of these reports. That is the report of the Committee on Military Affairs in which the Committee made certain recommendations or suggestions to the surgeon-general, and it has been suggested to me that it might be of some weight if this resolution or something similar to it would be presented and passed by other state medical associations. Therefore, I would like to move that the Secretary communicate this report and recommendations to other societies with the idea that the combined influence might have some effect in having these suggestions put into effect.

The motion was seconded and carried.

PRESIDENT BOYER: Are there any further corrections or remarks? What will you do with the minutes?

DR. F. J. SAVAGE (St. Paul): I move their adoption.

DR. ALBERT G. SCHULZE (St. Paul): I second it.

PRESIDENT BOYER: If there is no objection the report will stand as read.

Next is the report of the Council.

Dr. H. M. Workman, Tracy, read the report of the Council.

SECOND MEETING OF THE COUNCIL

The second meeting of the Council was held on Monday, July 14, 1930, at the Hotel Duluth. The meet-

ing convened immediately after the House of Delegates' meeting.

The following were present: H. M. Workman, W. H. Condit, G. S. Wattam, F. J. Savage, F. A. Dodge, W. A. Coventry, L. Sogge, W. W. Will, M. S. Henderson, E. A. Meyerding.

Motion made by Dr. Sogge seconded and carried that the minutes of the last meeting be approved as written.

Motion made by Dr. Savage, seconded and carried that the Committee on Schools for Laboratory Technicians be continued and that it endeavor to establish a standard whereby schools may be classified.

It was suggested that the President of the Council read to the House of Delegates letters from the Parents-Teachers Association and the opinion of the Attorney General regarding pre-school examinations.

It was recommended that the chairman of the Board of Medical Examiners be made a member of the Committee on Hospitals and Medical Education.

The meeting adjourned.

SECRETARY MEYERDING: You will recall the Council appointed the President of the Committee to confer with the President of the Parents-Teachers Association relative to the summer round-up, and this is the President's letter of March 12 to Mrs. A. H. Mendenhall, President Minnesota Congress of Parents and Teachers, and her reply.

March 12, 1930.

Mrs. A. A. Mendenhall, President,
Minnesota State Parent-Teachers Association,
1528 Jefferson Street,
Duluth, Minnesota.

In re: Summer Round-up of Children of Pre-school Age.

Dear Mrs. Mendenhall:

Answering the request of the Parent-Teachers Association for endorsement of the above mentioned movement by the Minnesota State Medical Society:

First: The Minnesota State Medical Society is in sympathy with anything tending to promote either public or private health or both.

Second: We are not in favor of health examinations *en masse*, inasmuch as we believe this method to be wasteful of time, inefficient in process and therefore faulty in its final diagnostic conclusions and advice as to treatment.

Third: We believe that physicians lending their aid to this activity should render thoroughly good service and receive commensurate compensation for their work.

Fourth: It is our belief that, in the prosecution of this work, the parents and guardians of children about to enter school should be encouraged to have their children examined by physicians of their own choice (preferably their family physician) and at their own expense. The children of those who for any reason are unable to meet their financial obligations should be examined by one or another of the free agencies.

Fifth: We recognize that in some few localities, owing entirely to local conditions, the examination must be conducted at public expense.

Taking the above provisions into consideration and believing that your association will not be unmindful of them in carrying on your work, the Minnesota State Medical Association whole-heartedly endorses the movement and assures you of its genuine coöperation.

Very respectfully yours,
S. H. BOYER, M.D., *President.*

MINNESOTA CONGRESS OF PARENTS AND TEACHERS
State Headquarters
200 City Hall, Duluth, Minnesota
March 12, 1930

Dr. S. H. Boyer, President,
State Medical Association,
Duluth, Minn.

My dear Dr. Boyer:

Thank you very much for your fine letter containing not only the endorsement of your association but good advice for better procedure.

I have sent the letter to the editor of our state magazine asking that all of the letter be published so that your position may not be misunderstood nor misrepresented. Your letter will be read at the next meeting of our state board and I am sure will be very much appreciated.

Sincerely yours,
MRS. AUSTIN MENDENHALL, *President.*

Secretary Meyerding read communications relative to the examination of children of pre-school age.

THE BOARD OF EDUCATION OF THE CITY OF DULUTH
Duluth, Minnesota.
May 1, 1930

Dr. S. H. Boyer, President,
Minnesota State Medical Association,
Lyceum Building,
Duluth, Minnesota.

Dear Dr. Boyer:

In connection with the examination of children of pre-school age, you may be interested in knowing that the office of the Attorney General has expressed the opinion that there is "no statutory authority which permits the use of the public funds of a school district for the medical or physical examination of children who are not attending the public schools," and that in reply to an inquiry made by the Commissioner of Education, as to whether it was lawful for a Board of Education to expend public money for medical or physical examination of children not attending the public schools, the reply was in the negative.

The opinion was issued April 28.

Very truly yours,
J. M. ROBINSON.

DR. C. L. HANEY (Duluth): We put that through the regular channels, through the school district of Duluth, through the Commissioner of Education, and through the Atorney-General's office. We knew pretty well beforehand we were going to get this opinion. After the P. T. A. reached the Attorney-General's office Mr. Phillips, the Assistant Attorney-General, practically reversed the decision, so the opinion reads now, I understand, that school children who are to enter school this fall can be examined. That is practically a reversal of the Attorney-General's opinion. That leaves it wide open. You can examine those who are entering school this fall. When we had this first opinion of course we had it all tied up.

PRESIDENT BOYER: You have heard the report, gentlemen. Are there any remarks or any discussion at all? What will you do with the report?

DR. ALBERT G. SCHULZE (St. Paul): I move it be accepted.

DR. J. R. MANLEY (Duluth): I second it.

PRESIDENT BOYER: If there is no objection, it will so stand.

The next order of business is the election of officers. Are there any nominations for the office of President?

DR. O. E. LOCKEN (Crookston): Mr. President and Members of the House of Delegates: In the past few years this Association has taken on a very intensive program of legislative and educational activities, and in order to carry on that work they have found it advisable to select the man for the office of president from the group of men who have been most active in doing that work, and that has been a very wise policy. Because of the many activities of the organization it has been necessary to have someone who is not only a man of distinction in our Association but also a man who really knows the problems and purposes of the Association. From time to time the Association has gone outside of the two large cities and Rochester to select some member of our Association from the rural sections.

Today we feel that that is a wise policy to follow. It has now been five years since the Association has selected such a man. I am very happy to have the privilege today to make the nomination of that very likeable gentleman and honorable member of our Association, Dr. L. Sogge of Windom, a man who I am sure we can say has a multitude of friends and not a single enemy. I nominate Dr. L. Sogge of Windom. (Applause.)

DR. R. C. FARRISH (Sherburn): I take very great pleasure in seconding the motion.

DR. N. O. PEARCE (Minneapilis): In the name of Hennepin County delegation, from one of the large cities of the organization, it gives me great pleasure to second the nomination of Dr. Sogge.

PRESIDENT BOYER: Are there any other nominations?

DR. F. H. MAGNEY (Duluth): I move the nominations be closed.

The motion was seconded.

PRESIDENT BOYER: I don't think that should be rushed in a hurry. Are there any other nominations?

DR. G. S. WATTAM (Warren): I move that the Secretary be instructed to cast the ballot of this House of Delegates for Dr. Sogge of Windom as our next President.

PRESIDENT BOYER: Apparently there were no other nominations. Therefore, the motion is in order.

The motion was seconded and carried.

SECRETARY MEYERDING: I hereby cast the unanimous ballot for L. Sogge as President for the ensuing year. (Applause.)

PRESIDENT BOYER: I appoint Dr. Locken and Dr. Wattam as a committee of two to escort Dr. Sogge into this chamber.

The next order is that of nominations for First Vice President.

DR. W. W. WILL (Bertha): A few years ago I was privileged to nominate a Vice President. This man was elected and proved to this Association that a Vice President can be of value to an association. That man later became the President of the Association and proved to be one of the greatest presidents this Association has ever had. I am not taking any credit for the man who was selected. I have in mind now a man for Vice President who I believe can render in either office a like service, a man who has been untiring in his efforts in behalf of this Association.

Inasmuch as we have just elected a President from the country, and inasmuch as probably the next year's meeting will be in Minneapolis, it seems wise that we should select a Vice President from the city of Minneapolis. With that in mind, I have great pleasure in presenting the name of William H. Condit of Minneapolis for First Vice President. (Applause.)

DR. ALBERT G. SCHULZE (St. Paul): I second it.

DR. W. A. FANSLER (Minneapolis): As delegate from Minneapolis I wish to second the nomination and say that the delegates from Minneapolis will be very happy to have Dr. Condit as our First Vice President, and feel it is an honor to Dr. Condit and to the Hennepin County Medical Society if he is elected.

PRESIDENT BOYER: Are there any other nominations.

DR. W. F. MAERTZ (New Prague): I make a motion that the Secretary cast the unanimous ballot of the House.

The motion was seconded and carried.

SECRETARY MEYERDING: I hereby cast the unanimous ballot for Dr. Condit as First Vice President.

PRESIDENT BOYER: Next in order is the Second Vice President. Nominations are in order. We have to have a Second Vice President, gentlemen. Does anybody want the job?

The audience arose and applauded as Dr. Sogge came forward.

PRESIDENT BOYER: It is hardly necessary to introduce the new President-Elect, but I shall call upon him to express himself as he sees best.

PRESIDENT-ELECT SOGGE: Gentlemen, I wish I were in possession of words that could in a slight degree express my appreciation of an act of this kind. Sunday night when I got in here somebody approached me and suggested that I serve as President for the coming year. I told him it was absolutely impossible; I could not fill that place. In the first place I did not deserve the honor and further I was not capable. This man told me that I was in the hands of my friends and that they had done considerable work along that line and I could not refuse. I feel, folks, that if I am to take this job I want to feel that I am in the hands of my friends and they have got to help me. I feel, with the competent Secretary that we have, we may get along, and the work will undoubtedly be done by him. I thank you from the bottom of my heart for the honor. I appreciate the honor, but I also realize the responsibility. Thank you. (Applause.)

PRESIDENT BOYER: I wish to assure Dr. Sogge that judging by past performances of the members of this Association and its officers, he will not lack for support in his efforts to continue the success of this Society.

The Second Vice President is still begging for an office.

DR. F. J. SAVAGE (St. Paul): I would like to place the name of Owen Parker of Ely in nomination for Second Vice President.

DR. G. S. WATTAM (Warren): I second it.

PRESIDENT BOYER: Are there any other nominations? If not, we will proceed to cast the ballot.

The motion was carried.

PRESIDENT BOYER: Next is Secretary. Do you want a new Secretary? (Laughter.) Please make a motion, somebody.

DR. C. L. SCOFIELD (Benson): I move that the nominations be closed (laughter), and that the President be instructed to cast the vote of the Society for Dr. Meyerding.

PRESIDENT BOYER: Are there any objections?

DR. H. M. WORKMAN (Tracy): I should like to say, Mr. President, that this is a great chance to economize. If we start in with a new Secretary he can do it with a good deal less money. (Laughter.) I will second the nomination. (Laughter.)

PRESIDENT BOYER: The ballot is hereby cast for Dr. Meyerding. (Applause.)

Would you like to talk, Dr. Meyerding?

Next in order is the election of a Treasurer.

DR. H. J. ROTHSCHILD (St. Paul): I take great pleasure in nominating Dr. A. G. Schulze to succeed himself as Treasurer of this Association for the ensuing year.

DR. C. P. ROBBINS (Winona): I move the Secretary cast the ballot.

PRESIDENT BOYER: It has been moved and seconded that the Secretary cast the ballot for Dr. A. G. Schulze as Treasurer.

The motion was carried.

SECRETARY MEYERDING: I hereby cast the ballot for A. G. Schulze as Treasurer. (Applause.)

PRESIDENT BOYER: We must proceed with the election of Councilors. Four are to be elected. There will be a vacancy shortly in the Fourth District. That vacancy must be filled. The present incumbent is Dr. F. A. Dodge of Le Sueur.

DR. M. S. HENDERSON (Rochester): Mr. Chairman and Members of the House of Delegates: Brother Dodge has been a member of this Council for twenty-eight years, and everybody in the Association has known him and respected him, and he now says he has had enough, and I think his wishes must be respected as much as we would like to have him serve in office. I would like to suggest the name of a man who has been active in all organized medicine and stands high in the profession, Dr. Holbrook of Mankato.

DR. W. F. MAERTZ (New Prague): I second the nomination.

PRESIDENT BOYER: Any other nominations?

DR. E. M. HAMMES (St. Paul): I move nominations be closed.

The motion was seconded and carried.

DR. W. C. PORTMANN (Jackson): I move the Secretary cast the ballot.

DR. G. S. WATTAM (Warren): I second the motion.

PRESIDENT BOYER: If there are no objections he is so instructed.

SECRETARY MEYERDING: I hereby cast the ballot for Dr. Holbrook as Councilor of the Fourth District.

PRESIDENT BOYER: We will now proceed to the Sixth District. The present incumbent is Dr. Condit of Minneapolis. He is now First Vice President, leaving a vacancy in the Sixth District. These are all officers-elect, because it is the first of the year that the change takes place.

DR. W. P. GREENE (Minneapolis): We have a man in Minneapolis who has very well proven himself as far as taking interest in the work of the State Association and particularly the local association is concerned. He is a man who is untiring in his efforts in promoting medical matters in the state and he has proven himself to be a live wire in every respect. I take great pleasure in nominating Dr. N. O. Pearce to succeed Dr. Condit.

DR. E. S. BOLEYN (Stillwater): I second the motion.

PRESIDENT BOYER: Are there any other nominations?

DR. H. M. WORKMAN (Tracy): I move that nominations be closed and the Secretary be instructed to cast the ballot.

The motion was seconded and carried.

SECRETARY MEYERDING: I hereby cast the ballot for Dr. N. O. Pearce of Hennepin County as Councilor of the Sixth District.

PRESIDENT BOYER: Dr. Pearce is duly elected. The Eighth District. G. S. Wattam is the present incumbent.

DR. A. D. HASKELL (Alexandria): It gives me great pleasure to offer the name of the present incumbent, Dr. Wattam of Warren, Minnesota.

DR. G. S. WATTAM (Warren): Mr. President, I deeply appreciate the fact that the delegate from my Councilor District has again placed me in nomination as Councilor. I have had great pleasure in serving with the present members of the Council for the past six years. It has been a pleasant duty for me but I feel that my age and the location that I have in my district make it very inadvisable at this time that I accept that nomination, and with the consent of the delegate, and no rebuttal, I would like to place in nomination a man whom you all know and who will serve you to better advantage than I can or have. I place in nomination Dr. Hagen of Moorhead.

DR. A. D. HASKELL (Alexandria): It has been the custom for us to abide by our Councilors' decisions. I will withdraw my motion.

DR. G. S. WATTAM (Warren): I would like to place in nomination Dr. O. J. Hagen of Moorhead.

PRESIDENT BOYER: It has been moved and seconded that O. J. Hagen be elected as Councilor of the Eighth District. Are there any other nominations?

It was moved, seconded and carried that the Secretary cast the ballot.

SECRETARY MEYERDING: I hereby cast the ballot for O. J. Hagen of Moorhead as Councilor of the Eighth District.

PRESIDENT BOYER: Dr. Hagen is duly elected.

Dr. Sogge has been a member of the Council for a good many years. His term would normally expire in 1933. His unexpired term must be filled.

DR. E. S. BOLEYN (Stillwater): I nominate William A. Piper of Mountain Lake.

The motion was seconded.

PRESIDENT BOYER: Are there any other nominations?

It was moved and seconded and carried that the Secretary cast the ballot.

SECRETARY MEYERDING: I hereby cast the ballot for Wm. A. Piper of Mountain Lake as Councilor of the Second District to fill the unexpired term of Dr. Sogge.

PRESIDENT BOYER: It is customary for the Council to present to the House of Delegates the names, or nominees for delegates to the House of Delegates in the American Medical Association. The names the Council have submitted are those of Dr. H. M. Johnson and Dr. W. F. Braasch. They will be elected for a period of two years providing the nominations of the Council meet with the approval of this body. This body is at liberty to make additional nominations if it be so inclined. What is your pleasure?

DR. E. S. BOLEYN (Stillwater): I move that the nominations of the Council be accepted.

DR. J. R. MANLEY (Duluth): I second it.

The motion was carried.

PRESIDENT BOYER: Two names for alternates were submitted by the Council, Dr. B. S. Adams and Dr. O. J. Hagen. Dr. Hagen has been elected to the Council. Therefore he will not be able to serve as an alternate delegate to the American Medical Association.

DR. W. F. BRAASCH (Rochester): In view of the fact that Dr. Hagen is a Councilor, there is no legal objection to it, and while he is unquestionably a very good man for this position, I wonder if it wouldn't be good policy, possibly, to spread the office around a bit. Therefore, in view of Dr. Hagen's name I would like to nominate Dr. W. L. Burnap as alternate. He already has had considerable experience in that field.

DR. G. S. WATTAM (Warren): I second the motion.

PRESIDENT BOYER: Are there any other nominations?

The motion was carried.

PRESIDENT BOYER: Dr. Burnap is then one of the candidates for the position of alternate. The two names standing for election are Drs. Adams and Burnap. What will you do with these nominations?

DR. W. A. COVENTRY (Duluth): Mr. President, I move that the Secretary be instructed to cast the ballot of the House of Delegates for Dr. Johnson and Dr. Braasch as delegates and Dr. Adams and Dr. Burnap as alternate delegates to the American Medical Association.

The motion was seconded and carried.

SECRETARY MEYERDING: I hereby cast the unanimous ballot of delegates to the American Medical Association and alternates as follows: H. M. Johnson and W. F. Braasch as delegates, and B. S. Adams and W. L. Burnap as alternates.

DR. J. R. MANLEY (Duluth): There has been one more new resolution submitted to the Reference Committee.

Dr. Manley read the resolution.

RESOLUTION

The Washington County Medical Society in regular monthly meeting, April 13, 1930, voted unanimously that the Secretary of this Society should draw up a resolution in regard to certain matters specified in said Resolution and present same to the President of the Minnesota Medical Association. The Resolution of said Society follows:

Be it resolved, that, whereas, numerous interests are constantly requesting or demanding from the regular medical profession free service, for example, general physical examinations and toxin-antitoxin administration to pre-school children, service the profession should be paid for, inasmuch as said service is of distinct benefit to whom rendered; and further, that such requests or demands are by this Society regarded as wedges toward state medicine; therefore, be it resolved, that this Society does request the Minnesota State Medical Association to take some steps or action toward uniform and fair basis for a satisfactory solution of these or similar questions now before us or coming up in the future. It is understood that this Society is in accord with the whole regular medical profession, that any attention will be cheerfully rendered, free of charge, in case of inability to pay. It is further resolved that these different agencies should be informed when requesting any free service that the regular medical profession does more real charity work than any other class. Be it further resolved that a copy of this Resolution be forwarded to Samuel H. Boyer, M.D., President of the Minnesota State Medical Association. Adopted at Stillwater, Minnesota, May 13, 1930.

WASHINGTON COUNTY MEDICAL SOCIETY
WADE R. HUMPHREY, M.D., *President*
E. SYDNEY BOLEYN, M.D., *Secretary.*

DR. MANLEY: The Committee recommends the acceptance of the resolution.

PRESIDENT BOYER: You have heard the resolution. The Committee recommends the acceptance thereof.

DR. MANLEY: I move that.

DR. G. S. WATTAM (Warren): I second the motion.

PRESIDENT BOYER: Is there any discussion? An expression of opinion really ought to be had on that, even though there be no dissenting opinion.

DR. E. S. BOLEYN (Stillwater): It was felt that we would like to have uniform action by the whole Society as to how we should deal with these different examinations. Some people have been trying to get this and that for nothing and notably the Parents-Teachers Association have been trying to get a meeting and place the matter before us. We have had two meetings. We have lost two programs because they didn't come. They first intimated if we didn't do that they would appoint somebody to do it. Next they wanted us to appoint one or two men from the Society to do these examinations. We have objected to that because experience at large seems to be that men appointed to do those examinations at schools have demanded they be done at schools. That is not the way to do it. The best way to do it is to have a family physician make the examinations and do them in the office so as to take sufficient time to give them the proper service they are entitled to. We would like to have the Society appoint a Committee to draw up some sort of a program for the examination and that it be accepted and that the school boards could give these blanks to the children, or the parents before the schools are opened, and they could go to the family physician and be examined, and those who come up for examination be notified it would be advisable to have their children examined. We also made a ruling that those who

could pay would be charged $5 for each child, and that those who could not pay would receive the service free.

PRESIDENT BOYER: Any further discussion?

The motion was carried.

PRESIDENT BOYER: The recommendations of Dr. Boleyn can be referred and will be referred to the Public Health Education Committee, which Committee we think can handle that very satisfactorily.

SECRETARY MEYERDING: Yesterday an amendment to the By-laws was submitted which reads as follows: "Resolved that Chapter IX, Section 1, be amended by striking out the words 'A committee on Necrology' and that the duties of this committee be transferred to duties of the Historical Committee."

DR. H. M. WORKMAN (Tracy): I move the adoption of that.

The motion was seconded and carried.

PRESIDENT BOYER: Have you any unfinished business?

DR. H. M. CONNER (Rochester): In twenty-eight years as Councilor, the case of Dr. Dodge should be recognized by the Society by a vote of thanks. I therefore move that this Society extend a vote of thanks to Dr. Dodge for his services these twenty-eight years.

The motion was seconded and the audience arose and applauded.

PRESIDENT BOYER: Next is time and place of the next meeting. Where are we going to meet next year?

DR. N. O. PEARCE (Minneapolis): In behalf of the Hennepin County Medical Association and the people of Minneapolis I want to offer an invitation for this organization to meet in Minneapolis for their next annual meeting. (Applause.)

The motion was seconded and carried.

PRESIDENT BOYER: The time of meeting had better be left to the decision of the Council, because they might have to change the time. They can't tell just when is the best time. Will someone make a motion as to the time?

DR. W. A. COVENTRY (Duluth): I move the time of the next annual meeting be left to the discretion of the Council.

The motion was seconded and carried.

PRESIDENT BOYER: A Committee is to be appointed to present the President-Elect at installation Wednesday morning at ten a. m. The Committee that escorted him in will be appointed to perform that function, Dr. Locken and Dr. Wattam.

A motion is in order to present resolutions of thanks to the St. Louis County Medical Society, Hotel Duluth, Duluth Chamber of Commerce, Duluth Tribune, and Duluth Herald. You can appoint the Secretary to do that if you wish. If there is no objection we will so act.

DR. G. S. WATTAM (Warren): I would so move.

PRESIDENT BOYER: It is all settled.

DR. C. P. ROBBINS (Winona): I offer this resolution to the House of Delegates: That the delegates meet a day before the regular convention so that the delegates can enjoy the program of the convention.

The motion was seconded.

SECRETARY MEYERDING: I would like to call to your attention to the By-Laws: "The House of Delegates shall meet at two p. m. on the first day of the annual session." I suppose we could start our annual session with the House of Delegates meeting, couldn't we? I don't know how to interpret that. I think if you are going to change it you should make it to meet in the morning so that we can get through with it in one day.

The By-laws and Constitution provide: "The House of Delegates will meet at two p. m. on the first day of the annual session. It may adjourn from time to time as may be necessary to complete its business provided the hours conflict as little as possible with the general meetings. The order of business shall be arranged as a separate section of the program."

We have to meet two different days. "The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes at the second meeting of the House of Delegates." It doesn't say the day after. They can meet in the morning or the afternoon.

DR. H. M. WORKMAN (Tracy): I think the trouble comes right here. The House of Delegates used to meet on the first day, then there were two days of scientific work, but a year or so ago we conceived the idea we wanted three days' scientific work. Dr. Robbins' suggestion means that we have to have a four-day session. The Council has already met twice.

DR. C. P. ROBBINS (Winona): Is it possible that the annual session can begin with the House of Delegates? I don't see why the House of Delegates can't meet a day before the regular scientific program.

DR. S. H. BAXTER (Minneapolis): I move you refer this resolution to the Council to discuss the feasibility of it and iron out the conflicts if there are any and arrange the program that way if possible, and leave it to their discretion.

PRESIDENT BOYER: Do you accept that as an amendment, Dr. Robbins?

DR. ROBBINS: I do.

The motion was seconded and carried.

PRESIDENT BOYER: Any other new business?

DR. W. F. BRAASCH (Rochester): I am sure we all are unanimous in feeling that the members of the St. Louis County Medical Society have fairly outdone themselves in the matter of hospitality, entertainment for the members, not alone the House of Delegates but our entire Association. I move that we express our appreciation of the efforts by a rising vote of thanks.

The audience arose and applauded.

SECRETARY MEYERDING: The Council will meet in this room immediately after the adjournment of the House of Delegates.

PRESIDENT BOYER: Is there any other new business? If not, a motion to adjourn is in order.

On motion regularly made, seconded and carried, the House of Delegates adjourned at three o'clock.

SCIENTIFIC PROGRAM

The scientific program was presented as published in the July number of MINNESOTA MEDICINE with the following omissions and additions.

Dr. Morris Fishbein, editor of the A. M. A. Journal, followed the other speakers at the Medical Economics meeting Monday evening.

Dr. W. J. Mayo spoke extemporaneously on the Diagnosis of Cancer of the Rectum in place of Dr. A. C. Strachauer, who was unable to be present.

The paper on Extra-Uterine Pregnancy by Dr. J. C. Masson, was read by Dr. W. N. Graves, the author having been unable to attend.

Professor Lorenz Boehler presented an additional moving picture demonstration portraying treatment of Fracture of the Os Calcis on Tuesday afternoon.

Dr. R. E. Farr being unable to attend the meeting, his paper on Local Anesthesia was read by Dr. W. N. Graves.

Following the Installation of Officers Wednesday morning, Dr. O. W. Parker presented the following report of the Committee appointed to award the gold medal offered by the Southern Minnesota Medical Association for the best scientific exhibit:

The Committee on Scientific Exhibit Award, having thoroughly studied all the exhibits from the standpoint of originality, practicability and manner of presentation, recommends that the Southern Minnesota Medical Association Medal for the best scientific exhibit at the annual meeting of the State Medical Association held at Duluth in 1930, be awarded to Dr. Leo G. Rigler of Minneapolis and his associates, for their demonstration of "Roentgen Studies of Free and Encapsulated Pleural Effusions," and that honorable mention be given to Dr. G. K. Wharton of Rochester, for his excellent and original work and beautiful slides and drawings of the blood supply of the pancreas with special reference to the blood supply of the Islands of Langerhans.

The Committee further commends the Southern Minnesota Medical Association for the gift of this medal, as it will be a definite stimulus for the development of original research work by the members of our Association.

ARNOLD ANDERSON
B. J. CLAUSEN
T. G. CLEMENT
F. J. HIRSCHBOECK
O. W. PARKER
E. M. HAMMES, *Chairman.*

Dr. Leo G. Rigler was then presented with the medal by Dr. Parker.

The papers presented will for the most part be published in succeeding numbers of MINNESOTA MEDICINE.

THE EFFECT OF RADIANT ENERGY ON SKIN TEMPERATURE

The Public Health Service in conducting studies relating to industrial hygiene has recently completed a report dealing with the effect of radiant energy on skin temperature. This report describes the instruments that were devised and employed in these studies to determine radiant energy and skin temperature. A general picture of the results obtained has also been given as an indication or sample of the relationship between skin temperature, radiant energy, and the atmospheric conditions among steel workers. The final comparisons have been left to a later monograph which will show what correlations may appear between conditions found and the sickness rates, primarily pneumonia.

The following points have come out rather clearly in this preliminary analysis:

1. Intense sources of radiant energy had a pronounced effect on the skin temperatures of workers exposed to them; the forehead and cheeks showed the greatest increase.

2. Great differences in the skin temperatures of different parts of the body, for a single individual, were found in workers exposed to radiant energy.

3. Even under relatively cold atmospheric conditions, not far above the freezing point, high skin temperatures were encountered in workers exposed to radiant energy.

4. For workers not exposed to radiant energy there was a definite relation between atmospheric conditions and skin temperatures, both for arduous and for moderate work; the skin temperatures increasing with increase of effective temperature.

MEDICAL SERVICE IN FEDERAL PRISONS

On May 13, 1930, the President approved an Act of Congress which authorized the United States Public Health Service to provide medical service in Federal penal and correctional institutions under the Department of Justice. Henceforth the medical and psychiatric work in Federal prisons will be supervised and furnished by personnel of that Service. This new legislation is considered important in the field of penology and mental hygiene, and is part of the program for improving the conditions in Federal prisons, and also an effort to promote uniformity in the medical work of the Federal Government.

It is obvious that important medical problems arise in connection with the detailed care of Federal prisoners and that the medical service of a modern prison involves certain routine procedure and also certain research activities, the latter relating directly to the solution of medical administrative problems and to increasing the sum of knowledge concerning technical medical questions. The routine requirements of a prison medical service involve the psychiatric examination and classification of prisoners and the treatment and supervision of all mentally diseased inmates. It also involves the conduct of physical examinations sufficient in scope to permit of the prompt recognition and correction of physical defects and diseases. All the necessary facilities for reasonably meeting these requirements are largely technical or administrative medical questions.

The psychiatric examination and classification of inmates is of very great value to those concerned with the application of disciplinary measures; with the protection of the mentally disordered inmate; with the protection of other inmates and employees; with the treatment of prisoners generally; with the transfer of mentally disordered persons to institutions most suited to give specialized care; and with the subject of parole and discharge of inmates. A more intimate knowledge of the mental characteristics of prisoners should contribute to a better understanding of several features involved in correctional systems generally; to the necessity for specialized methods in care and procedure; and to the evolution of institutional facilities to meet requirements applicable to specific types of cases. Such a program will intimately dovetail with other activities of the prison, having for their object individual care, supervision, and disposition of inmates.

It is obvious that the inmates of prisons are subject to the same intercurrent physical and mental illnesses, diseases, or defects, as are seen among those that comprise the general population. A properly organized prison medical service, therefore, must be both general and special in character to meet these needs.

A well-organized medical service in a modern prison can contribute to the welfare of inmates and employees in ways other than those mentioned, by rendering advice and counsel respecting sanitation and personal hygiene; by helping to organize and guide recreational, educational, occupational, and vocational activities with a view to promoting the health of both inmates and employees; and by giving assistance and advice for maintaining a wholesome and well-balanced dietary.

It is obvious that the chief medical officer of a large modern prison has an important and specialized duty to perform, and one requiring special training, administrative ability, tact, and judgment, and that adequate assistance is necessary for him to meet the demands of a well-balanced medical service.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

EXAMINATION REPORT, APRIL, 1930

CANDIDATES BY EXAMINATION

Name	School and Date of Graduation	Address
Auld, Irving	Northwestern, M.D., 1929	317 E. 5th St., Duluth, Minn.
Brown, Robert Whitcomb	Harvard, M.D., 1928	Mayo Clinic, Rochester, Minn.
Burkley, George Gregory	U. of Pittsburgh, M.D., 1928	Mayo Clinic, Rochester, Minn.
Caldwell, John Mars, Jr.	U. of Georgia, M.D., 1928	Mayo Clinic, Rochester, Minn.
Carlson, Hjalmar Edwin	U. of Minn., M.B., 1929	1038 Matilda St., St. Paul, Minn.
Castleton, Kenneth Bitner	U. of Pa., M.D., 1927	Mayo Clinic, Rochester, Minn.
Chor, Herman	U. of Maryland, M.D., 1928	Mayo Clinic, Rochester, Minn.
Espersen, R. Wayne	U. of Minn., M.B., 1929	251 Drake Road, Bend, Oregon
Grimes, Allen Evans, Jr.	Northwestern, M.D., 1928	Mayo Clinic, Rochester, Minn.
Happe, Lawrence John	Creighton, M.D., 1929	Marshall, Minn.
Herbert, Willis Leo	Creighton, M.D., 1929	Maynard, Minn.
Herbst, Kenneth Albert	U. of Minn., M.B., 1929	Hastings, Minn.
Holmstrom, Carle H.	U. of Minn., M.B., 1929	St. Mary's Hosp., Duluth, Minn.
Humphrey, Arthur Allan	Northwestern, M.D., 1929	Mayo Clinic, Rochester, Minn.
Johanson, Waldemar G.	U. of Minn.,M.B., 1930	627 E. Jessamine St., St. Paul, Minn.
Johnson, Arthur Bernhoff	U. of Minn.,M.B., 1930	3606 Dupont Ave. N., Minneapolis, Minn.
Johnson, Herbert Paul	U. of Minn., M.B., 1929	1604 Elliot Ave., Minneapolis, Minn.
Jordan, Lewis Stanley	Eclectic Med. Coll., M.D., 1926 Cincinnati, Ohio	Riverside San., Granite Falls, Minn.
Jorris, Edwin Hall	U. of Minn., M.B., 1929	St. Mary's Hosp., Duluth, Minn.
Knapp, Miland Elbert	U. of Minn., M.B., and M.D., 1929	1538 Hillside Ave. N., Minneapolis, Minn.
Knight, Homer Holcomb	U. of Minn., M.B., 1929	General Hospital, Minneapolis, Minn.
Loucks, Milo M.	U. of Minn., M.B., and M.D., 1930	Pipestone, Minn.
Lynch, Francis W.	U. of Minn., M.B., 1929	University Hosp., Minneapolis, Minn.
McLane, Evelyn Gruhlke	Rush, M.D., 1930	Sleepy Eye, Minn.
Mark, Hilbert	U. of Minn., M.B., 1929; M.D., 1930	Akeley, Minn.
Messick, Joseph Marion	U. of Pa., M.D., 1928	Mayo Clinic, Rochester, Minn.
Murray, Robert Anthony	U. of Minn., M.B., 1929	St. Mary's Hosp., Duluth, Minn.
Olson, Clifford A.	U. of Minn., M.B., 1930	Swedish Hospital, Minneapolis, Minn.
Palmer, Bascom Willcox	Med. Coll. of South Carolina, M.D., 1928	Miller Clinic, Hamm Bldg., St. Paul, Minn.
Rademacher, Clyde J.	U. of Minn., M.B., 1929	Kimball, Minn.
Rice, Herbert R.	U. of Minn., M.B., 1929	3136 2nd Ave. S., Minneapolis, Minn.
Russell, Sidney Benteen	U. of Minn., M.B., 1929	St. Mary's Hosp., Minneapolis, Minn.
Ryan, Joseph Maurice	St. Louis U. Sch. of Med., M.D., 1929	St. Paul Clinic, St. Paul, Minn.
Sharp, Jay Emerson	Ohio State U., M.D., 1925	302 Furlow Apt., Rochester, Minn.
Smisek, Elmer Albert	U. of Minn.,M.B., 1929; M.D., 1930	957 Arcade St., St. Paul, Minn.
Spooner, Alexander Dwight	U. of Wis., M.D., 1928	Mayo Clinic, Rochester, Minn.
Stenberg, Sherman T.	U. of Minn., M.B., 1929	2228 Seabury Ave., Minneapolis, Minn.
Swedenburg, Paul A.	U. of Minn., M.B., 1930	901 E. River Road, Minneapolis, Minn.
Tavenner, John Lyle	Northwestern, M.B., 1929	Waseca, Minn.
Taylor, James E. C.	Ohio State U., M.D., 1928	610 8th Ave. S. W., Rochester, Minn.
Vogel, Howard A.	U. of Minn., M.B., 1930	New Ulm, Minn.
Wahlberg, Elmer Waldor	U. of Minn., M.B., 1929	Isle, Minn.

CANDIDATES BY RECIPROCITY

Dierkes, Gustave J.	Creighton, M.D., 1917	Rollingstone, Minn.
Harmeier, John Watson	U. of Pittsburgh, M.D., 1928	Mayo Clinic, Rochester, Minn.
Hewitt, Edith Swartwout	George Washington Univ. Med. Sch., M.D., 1924	Mayo Clinic, Rochester, Minn.
Mork, Frank Edward	Creighton, M.D., 1929	803 Washington Ave. S., Minneapolis
Ruffin, Wilcox	U. of Va., M.D., 1926	Mayo Clinic, Rochester, Minn.

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Hazen, S. Frank	U. of Pa., M.D., 1925	Mayo Clinic, Rochester, Minn.
Patmos, Martin	U. of Mich., M.D., 1928	Mayo Clinic, Rochester, Minn.

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Benjamin, Edwin Grimshaw	U. of Minn., M.B., 1930	1727 Med. Arts Bldg., Minneapolis, Minn.
Bennett, Richard Jacques, Jr.	Temple Univ., M.D., 1927	Ancker Hospital, St. Paul, Minn.
Borgerson, Murly Angus	U. of Minn., M.B., 1930	N. P. B. A. Hospital, 1515 Charles St., St. Paul, Minn.
Carlson, Leonard Telford	U. of Minn., M.B., 1930	510 Oliver Ave. N., Minneapolis, Minn.

Name	School and Date of Graduation	Address
Conlin, Leo James	U. of Minn., M.B., 1930	St. Mary's Hospital, St. Louis, Mo.
Crossland, Paul Marion	U. of Minn., M.B., 1930	329 Union St. S.E., Minneapolis, Minn.
Dalton, Burr	U. of Minn., M.B., 1930	312 Harvard St., S.E., Minneapolis, Minn.
DeCourcy, Donald Michael	Marquette, M.D., 1930	717 Conway St., St. Paul, Minn.
Dewey, Earle Thomas	U. of Minn., M.B. and M.D., 1928	City and County Hosp., San Francisco, Calif.
Duncan, James Wallace	Rush, M.D., 1930	1019 5th Ave. S., Moorhead, Minn.
Ekblad, Gordon Harold	U. of Minn., M.B., 1930	1109 Churchill Ave., St. Paul, Minn.
Fritsche, Theodore Roosevelt	U. of Minn., M.B., 1930	New Ulm, Minn.
Galinson, Sam	U. of Minn., M.B., 1930	Jewish Hospital, St. Louis, Mo.
Garrow, Douglas Moore	U. of Minn., M.B., 1930	1315 Goodrich Ave., St. Paul, Minn.
Goehl, Reinhold O.	U. of Minn., M.B., 1930	La Moure, N. Dak.
Goodman, Max John	U. of Minn., M.B., 1930	911 Newton Ave. N., Minneapolis, Minn.
Graham, William Donald	U. of Minn., M.B., 1930	664 Conway St., St. Paul, Minn.
Greenberg, Morris	U. of Minn., M.B., 1930	Ancker Hospital, St. Paul, Minn.
Halpin, Joseph Ephraim	Marquette, M.D., 1930	St. Joseph's Hospital, St. Paul, Minn.
Hamm, Frank Coleman	U. of Mich., M.D., 1925	Mayo Clinic, Rochester, Minn.
Hargreaves, Robert Paul	U. of Minn., M.B., 1930	2328 Alden St., St. Paul, Minn.
Hedin, Raymond Freeman	U. of Minn., M.B., 1930	339 Sydney St., St. Paul, Minn.
Helseth, Hovald Kjoss	U. of Minn., M.B., 1929; M.D., 1930	Appleton, Minn.
Hennessy, Harold Richard	U. of Minn., M.B., 1930	1414 S. Hope St., Los Angeles, Cal.
Hershkowitz, Saul Theodore	U. of Minn., M.B., 1929; M.D., 1930	939 Grand Ave., St. Paul, Minn.
Horn, Carl Edward	U. of Minn., M.B., 1930	217 E. Cherry St., Mankato, Minn.
Howard, Elna Miriam	U. of Minn., M.B., 1929; M.D., 1930	1949 Hayes St. N.E., Minneapolis, Minn.
Johnson, Catherine Welch	U. of Minn., M.B., 1930	1526 A St. N. E., Washington, D. C.
Kirklin, Oren Leslie	Ind. Univ. Sch. of Med., M.D., 1928	Apt. D. 3, College Apartments, Rochester, Minn.
Larson, Paul Nordland	U. of Minn., M.B., 1930	2610 Polk St. N.E., Minneapolis, Minn.
Medelman, John Paul	Rush, M.D., 1930	1953 Medical Arts Bldg., Minneapolis, Minn
Mookerjee, Marcus Kellogg	U. of Minn., M.B., 1930	Miller Hospital, St. Paul, Minn.
Morris, Richard Edward	U. of Minn., M.B., 1929; M.D., 1930	St. Luke's Hospital, St. Paul, Minn.
Ninneman, Newton Noah	U. of Minn., M.B., 1929; M.D., 1930	604 Besse Bldg., Minneapolis, Minn.
Olson, Archibald Oscar	Rush, M.D., 1930	Hendricks, Minn.
Peterson, David Berger	U. of Minn., M.B., 1930	588 York St., St. Paul, Minn.
Petraborg, Harvey Theodore	U. of Minn., M.B., 1929; M.D., 1930	Stillwater, Minn.
Rodgers, Richard S.	U. of Minn., M.B., 1930	3645 Park Ave., Minneapolis, Minn.
Rufe, Redding Henry	U. of Minn., M.B. and M.D., 1928	927 Fulton St., S.E., Minneapolis, Minn.
Salter, Reginald Arnold	McGill, M.D., 1926	317 Union St. S. E., Minneapolis, Minn.
Schoffman, William Francis	U. of Minn., M.B., 1929; M.D., 1930	Abbott Hospital, Minneapolis, Minn.
Schunk, Peter Monte	Rush, M.D., 1929	Mayo Clinic, Rochester, Minn.
Sherman, Royal V.	U. of Minn., M.B., 1930	1821 Goodrich Ave., St. Paul, Minn.
Starkey, Thomas Austin	U. of Minn., M.B., 1930	1011 Ashland Ave., St. Paul, Minn.
Tovell, Ralph Moore	Queens Univ., M.D., 1926	Mayo Clinic, Rochester, Minn.
Trommald, Gladys B. K.	U. of Minn., M.B., 1929; M.D., 1930	502 N. 7th St., Brainerd, Minn.
Tyvand, Raymond Eugene	Rush, M.D., 1929	Mayo Clinic, Rochester, Minn.
Weiler, Kenneth	Northwestern, M.D., 1929	Hastings, Minn.
Westman, Ragnar Theophile	U. of Minn., M.B., 1930	102 17th St., Cloquet, Minn.

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Beaver, Donald Charles	Detroit Coll. of Med., M.B., 1926; M.D., 1927	Mayo Clinic, Rochester, Minn.
Hartfield, Herbert Arthur	Univ. of Louisville Sch. of Med., M.D., 1928	1019 Wakefield Ave., St. Paul, Minn.

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Wakefield, Elmer Glenn	Johns Hopkins, M.D., 1925	Mayo Clinic, Rochester, Minn.
Wilson, John Allen	Rush, M.D., 1929	1210 Lowry Medical Arts Building St. Paul, Minn.